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OR,

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To my much Honoured Friend

TOBIAS GARBRAND,

DOCTOR of PHYSICK, and Principal of *Gloceſter-Hall* in *OXFORD*.

Sir!

IT is my ambition to let the world know upon what ſcore it is that I do eſpecially honour men. It is not Sir! as they are high born Heirs of the great Potentates, for which moſt honour them; (and upon which account I alſo ſhal not deny them their due) but as they excel in honeſty, and are friends to Art. That poor Philoſophers ſhould take no delight in riches, and rich men ſhould take great delight in Philoſophy, is to me an argument, that there is more delight, honour, and ſatisfaction in the one then in the enjoyment of the other. I once read of a noble mans Porter that let in all that were rich apparelled, but excluded a poor Philoſopher; but I ſhould, if I had been in his

place, have rather let in the Philoſopher, without the gay clothes, than the gay clothes without the Philoſopher. As long as I have ſenſe or reaſon, I ſhall improve them to the honour of Art, eſpecially that of Alchymie. In the perfection thereof there are riches, honour, health, and length of dayes: by it Artefius *lived* 1000 *years,* Flammell *built* 28 *Hoſpitals with large revenues to them, beſides Churches and Chappels; for it, both they and divers more were accounted Philoſophers, and wiſe men, which ſounds more honourably in my ears, than all the ratling and empty titles of honour whatſoever beſides. In the perfection of this Art, I mean the accompliſhing of the Elixir, is the Sulphur of Philoſophers ſet at liberty, which gratifies the releaſers thereof with three Kingdoms,* viz. *Vegetable, Animal, and Mineral, and what cannot they do, and how honourable are they, that have the command of theſe? They may command Lead into Gold, dying plants into fruitfulneſs, the ſick into health, old age into youth, darkneſs into light, and what not? A moneth would fail to give you an account of their power and dominations. Now for the effecting of this, I ſhall beſides what I have adviſed in the Epiſtle to the Reader, ſay only this; Court the Mother, and you win the Daughter; prevail with Nature, and the fair* Diana *of the Philoſophers is at your ſervice.*

Now

Now if you cannot prevail with Nature for the faireſt of her daughters, viz. *the Mercury of Philoſophers, yet ſhe hath other daughters of wonderful beauty alſo, as are the Eſſences, and Magiſteries of Philoſophers, which alſo are endowed with riches, honour, and health, and any of theſe you may more eaſily prevail with their Mother Nature for. This Art of Alchymie is that* Solary *Art, which is more noble than all the other ſix Arts and Sciences, and if it did once throughly ſhine forth out of the clouds whereby it is ecclipſed, would darken all the reſt, (as the Sun doth the other ſix Planets) or at leaſt ſwallow up their light. This is that true natural philoſophy which moſt accurately anatomizeth Nature and natural things, and ocularly demonſtrates the principles and operations of them: That empty natural philoſophy which is read in the Univerſities, is ſcarce the meaneſt hand-maid to this Queen of Arts. It is pity there is ſuch great encouragement for many empty, and unprofitable Arts, and none for this, and ſuch like ingenuities, which if promoted; would render an Univerſity far more flouriſhing, than the former. I once read or heard, of a famous Univerſity beyond Sea, that was faln into decay, through what cauſe I know not: but there was a general counſel held by the learned, how to reſtore it to its primitive glory: The* Medium *at laſt agreed*

upon, was the promoting of Alchymie, and encouraging the Artiſts themſelves: But I never expect to ſee ſuch rational actings in this nation till ſhadows vaniſh, ſubſtances flouriſh, and truth prevail; which time I hope is at hand and deſired by all true artiſts, and to my knowledge, eſpecially by your ſelf, upon which account I truly honour you. Now to your ſelf therefore I crave leave to adumbrate ſomething of that Art which I know you will be willing for the publick good to promote. I dedicate this Treatiſe to you, not that it is worthy of your acceptance, but that it may receive worth by your accepting of it. I preſent it to you (as men bring lead to Philoſophers to be tinged into gold) to receive the ſtamp of your favour, and approbation, that it may paſs cnrrant, with acceptance amongſt the ſons of Art, whereby you will continue to oblige him who is

LONDON,
November.
25. 1650.

SIR,

Your moſt obliged Servant,

John French.

To the Reader.

THere is a glut of Chymical books, but a ſcarcity of Chymical truths: Nature and Art affords variety of Spagirical Preparations; but they are as yet partly undiſcovered, partly diſperſed in many books, and thoſe of divers Languages, and partly reſerved in private mens hands. When therefore I conſidered what need there is of, and how acceptable a general Treatiſe of Diſtillations might be, eſpecially to our Engliſh Nation (and the rather ſince Baker upon Diſtillations is by reaſon of the deſcription of a few Furnaces, and Veſſels therein, beſides which there is ſmall variety either of Preparations, or Curioſities, ſold at ſuch a high rate) I thought I could do them no better ſervice then to preſent them with ſuch a Treatiſe of that ſubject, which ſhould contain in it the choiſeſt preparations of the ſelecteſt Authors, both ancient and modern, and theſe of ſeveral languages, and which I have attained by my own long and manual experience, together with ſuch as I have by way of exchange purchaſed out of the hands of private men, which they had monopolized as great ſecrets: But on the other hand, when I conſidered what a multitude of Artiſts there are in this Nation, from many of which more and better things might be expected, then from my ſelf; I was at a nonplus in my reſolutions, fearing it might be accounted an unpardonable preſumption in me to undertake, that which might be better performed by others: But for the avoiding of this aſperſion, be pleaſed to underſtand, that I preſent not this to the world under any other notion than of a rough draught (which indeed is the work of the more unskilful, and therefore of my ſelf, without exception) to be poliſhed by the more expert Artiſt. I rejoyce as at the break of the day after a long tedious night, to ſee how this ſolitary Art of Alchymie begins for to ſhine forth out of the clouds of reproach, which it hath a long time undeſervedly layen under. There are two things which have a long time ecclipſed it, viz. the miſts of Ignorance, and the ſpecious lumary body of deceit. Ariſe O Sun of truth, and diſpel theſe interpoſed

fogs,

fogs, that the Queen of Arts may triumph in ſplendour! If men did believe what this Art could effect, and what variety there is in it, they would be no longer ſtraightened by, nor bound up to or jurare in verba Galeni, vel Ariſtotelis, but would now ſubſcribe a new engagement to be true and faithful to the principles of Hermes, and Paracelſus, as they ſtand eſtabliſhed without Ariſtotle their Prince, and Galen, and Hippocrates, their Lords and Maſters. They would no longer ſtand dreaming forth, Sic dicit Galenus, but Ipſe dixit Hermes. I deſire not to be miſtaken, as if I did deny Galen his due, or Hippocrates what is his right, for indeed they wrote excellently in many things, and deſerved well therely; That which I cannot allow of in them is their ſtrict obſervation of the quadruplicity of humours (which in the School of Paracelſus, and writings of Helmont, where the anatomy of humours hath been more rationally and fully diſcuſſed, hath been ſufficiently confuted) and their confining themſelves to ſuch crude Medicines, which are more fit to be put into Spagyrical veſſels for a further digeſtion, then into mens bodies to be fermented therein. Certainly if men were leſs ignorant they would preferre Cordial Eſſences before Crude Juices, Balſamical Elixirs before Flegmatick Waters, the Mercury of Philoſophers before common Quick-ſilver. But many men have ſo little inſight in this Art, that they ſcarce believe any thing in it beyond the Diſtilling of Waters, and Oils, and extracting of Salts; nay many that pretend to Philoſophy, and would be accounted Philoſophers, are ſo unbelieving, that, as ſaith Sandivogius, although he would have intimated the true Art to them word by word, yet they would by no means underſtand or believe that there was any water in the Philoſophers ſea. And as he in this caſe, ſo I in another know divers that will not believe that common Quick-ſilver can of it ſelf be turned wholly into a Tranſparent Water, or that glaſs can be reduced into Sand and Salt of which it is made, ſaying that fuſio vitrificatoria eſt ultima fuſio, or that an hearb may be made to grow in two hours, and the Idea of a plant to appear in a glaſſe, as if the very plant it ſelf were there, and this from the Eſſence thereof, and ſuch like preparations as theſe: the two former whereof may be done in half an hour, but the latter requires a longer time, but yet poſſible. And for the poſſibility of the Elixir, you ſhall as ſoon perſwade them to believe they know nothing (which is very hard, nay an impoſſible thing

thing to do) then to believe the poſſibility thereof. If there be any ſuch thing (ſay they) why are not the poſſeſſors thereof infinitely rich, famous, do many miracles and cures, and live long? Theſe Objections, eſpecially ſome of them, ſcarce deſerve an anſwer; yet I ſhall, to ſhew the vanity of them, make ſome reply thereunto. Did not Artefius *by the help of this medicine live* 1000. *years? Did not* Flammell *build fourteen Hoſpitals in* Paris, *beſides as many in* Bologne, *beſides Churches, & Chappels, with large revenews to them all? Did not* Bacon *do many miracles? and* Paracelſus *many miraculous cures? Beſides what ſaith* Sandivogius? *I have, ſaith he, incurr'd more dangers and difficulties by diſcovering my ſelf to have this ſecret, then ever I had profit by it; and whoſoever I would diſcover my ſelf to the great Ones, it alwaies redounded to my prejudice, and danger. Can a man that carrieth alwaies about him* 10000 *pounds worth of Jewels and Gold, travel every where up and down, ſafe, and not be robbed? Have not many rich money-mongers been tortured into a confeſſion where their money was concealed? Did you never hear of a vapouring fellow in* London, *that pretending to the knowledge of this Myſtery, was on a ſudden caught aſide by money-thirſters, and by them tormented with tortures little leſs then thoſe of hell, being forced thereby (if he had known it) into a diſcovery of it? To ſay nothing of being in danger of being ſubjected, and enſlaved to the pleaſure of Princes, and of becoming inſtrumental to their luxury, and tyranny, as alſo being deprived of all liberty, as once* Raimundus Lullius. *The truth is, the greateſt matter that Philoſophers aim at, is the enjoyment of themſelves, for which cauſe they have ſequeſtred themſelves from the world, and become* Hermites: *Well therefore, and like a Philoſopher ſpake* Sandivogius, *when he ſaid, Believe me, if I were not a man of that ſtate and condition that I am of, nothing would be more pleaſant to me, then a ſolitary life, or with* Diogenes *to live hid under a tub; for I ſee all things in this world to be but vanity; and that deceit and covetouſneſs prevail much, that all things are vendible, and that vice doth excel vertue. I ſee the better things of the life to come before mine eyes, I rejoyce in theſe: Now I do not wonder, as before I did, why Philoſophers when they have attained this medicine, have not cared to have their daies ſhortned, (although by the vertue of their medicine they could have prolonged them) for every Philoſopher hath the life to come ſo clearly ſet before his eyes, as thy face is ſeen in a*

glass. Thus much by way of reply to the frivolous objections of those that believe not the verity of this Art, and not only so, but will not believe it. If you shew'd discover to them the process of the Philosophers Stone, they would laugh at your simplicity, and I will warrant you never make use of it: Nay if you should make projection before them, they would think even in that there were a fallacy, so unbelieving are they: so I find them, and so I leave them, and shall for ever find them the same.

There is another sort of men by whom this art hath been much scandalized, and they indeed have brought a great Odium upon it, by carrying about, and vending their whites, and reds, their sophisticated oyls, and salts, their dangerous and ill prepared Turbithes, *and* Aurum Vitæ's. *And indeed it were worth while, and I might do good service for the Nation, to discover their cheats, as their sophisticating of Chymical oyls with spirit of Turpentine, and salts, with salt extracted out of any wood-ashes and such like; but here is not place for so large a discourse as this would amount to. I shall only at this time relate to you how* Penotus *was cheated with a sophisticated Oil of gold, for saith he, I gave 24. duckets for the process of an* Aurum Potabile *which was much cryed up and magnified at* Prague, *but at last it proved to be nothing but a mixture of oil of Camphire, Cloves, Fennel-seed, and of Vitriol tinged with the leaves of Gold. I know I shall incurre the displeasure of some, but they are sophisticating, cheating mountebanks, who indeed deserve to be bound to the peace, because many men, I dare swear, through their means, go in danger of their lives: Better it is that their knavery should be detected, then a noble Art through their villany be clouded, and aspersed.*

Now we must consider that there are degrees in this Art; for there is the accomplishing of the Elixir it self, and there is the discovering of many excellent essences, magisteries, and spirits, &c. which abundantly recompence the discoverers thereof with profit, health and delight. Is not Paracelsus *his* Ludus, *that dissolves the stone, and all tartarous matter in the body into a liquor, worth finding out? Is not his* Tinea Scatura *a most noble Medicine, that extinguisheth all preternatural heat in the body in a moment? Is not his* Alcahest *a famous dissolvent, that can in an instant dissolve all things into their first principles, and withal is a* Specificum *against all distempers of the liver? Who would not take pains to make the quintessence of Honey and the Philo-*

Philoſophical Spirit of Wine, which are cordial and balſamical even to admiration? A whole day would fail to reckon up all the excellent, admirable raritie's that by this ſpagyrical Art might be brought to light; in the ſearching out of which, why may not the Elixir it ſelf at laſt be attained unto? Is it not poſſible for them that paſs through many Philoſophical preparations, to unfold at laſt the Riddles, and Hieroglyphicks of the Philoſophers? or were they all meer Phantaſms? Is there no fundamentum in re *for this ſecret? Is there no Sperme in gold? Is it not poſſible to exalt it for multiplication? Is there no univerſal Spirit in the world? Is it not poſſible to find that collected in one thing, which is diſperſed in all things? What is that which makes gold incorruptible? What induced the Philoſophers to examine gold for the matter of their medicine? Was not all gold once living? Is there none of this living gold, the matter of Philoſophers, to be had?* Did Sandivogius *the laſt of known Philoſophers ſpend it all? Surely there is matter enough for Philoſophers, and alſo ſome Philoſophers at this day for the matter, although they are unknown to us. There are, ſaith* Sandivogius, *without doubt many men of a good conſcience both of high and low degree (I ſpeak knowingly) that have this Medicine, and keep it ſecretly: If ſo, let no man be diſcouraged in the proſecution of it, eſpecially if he take along with him the five Keyes which* Nollius *ſets down, which indeed all Philoſophers with one conſent enjoyn the uſe and obſervation of.*

1. *Seeing it is a thing divine, and cœleſtial, it muſt be ſought for from above, and that not without a full reſolution for a pious, and charitable improvement of it.*

2. *Before thou betakeſt thy ſelf to the work, propound to thy ſelf what thou ſeekeſt for, and enter not upon the practick till thou art firſt well verſed in the theory; for it is much better to learn with thy brains and imagination, then with thy hands, and coſts, and eſpecially ſtudy nature well, and ſee if thy propoſals be agreeable to the poſſibility thereof.*

3. *Diligently read the ſayings of true Philoſophers, read them over again and again, and meditate on them, and take heed thou doeſt not read the writings of impoſters inſtead of the Books of the true Philoſophers. Compare their ſayings with the poſſibility of Nature, and obſcure places with clear, and where Philoſophers ſay they have erred, do thou beware, and conſider well the general Axioms of Philoſophers, and read ſo long till thou ſeeſt a ſweet Harmony and conſent in the ſayings of them.*

4. *Imagine not high things, but in all things imitate nature,* viz. *in matter; in removing what is Heterogeneous; in weight; in colour; in fire; in working; in ſlowneſs of working; and let not thy operations be vulgar, neither thy veſſels; work diligently and conſtantly.*

5. *If it be poſſible, acquaint thy ſelf throughly with ſome true Philoſophers. Although they will not directly diſcover themſelves that they have this ſecret, yet by one circumſtance or another it may be concluded that they were not ignorant of it? Would not any rational man that had been converſant with* Bacon, *and ſeeing him do ſuch miraculous things, or with* Sandivogius *who did intimate the Art to ſome word by word, have concluded that they were not ignorant of it? There have been Philoſophers, and perhaps ſtill are, that although they will not diſcover how it is made, yet may certifie you, to the ſaving of a great deal of coſt, pains, and time, how it is not made: and to be convinced of an errour is a great ſtep to the truth. If* Ripley *had been by any Tutor convinced of thoſe many errours before he had bought his knowledge at ſo dear a rate, he had long before, with leſs charges attained to his bleſſed deſire.*

And as a friendly tutor in this, ſo in all ſpagyrical preparations whatſoever, is of all things moſt neceſſary. A faithful well experienced maſter will teach thee more in the myſteries of Alchymie in a quarter of a year, then by thine own ſtudies and chargeable operations thou ſhalt learn in ſeven years. In the firſt place therefore, and above all things apply thy ſelf to an expert, faithful, and communicative Artiſt, and account it a great gain, if thou canſt purchaſe his favour, though with a good gratuity, to lead thee through the manual practice of the chiefeſt and choiſeſt preparations. I ſaid apply thy ſelf to an Artiſt, for there is ſcarce any proceſs in all Chymiſtry ſo eaſie, that he that never ſaw it done will not be to ſeek, and commit ſome errors in the doing of it. I ſaid expert, that he may be able to inſtruct thee aright, faithful; that as he is able, ſo he may faithfully perform what he promiſeth; and communicative, that he may be free in diſcovering himſelf and his Art to thee. The truth is, moſt Artiſts reſerve that to themſelves, which they know; either out of a deſire to be admired the more for their undiſcovered ſecrets, or out of envie to others knowledge: But how far this humour is approvable in them, I leave it others to judge; and as for my part I have here communicated upon the account of a bare acceptance only what I have with many years pains, much reading, and

great

great coſts known. There is but one thing which I deſire to be ſilent in, as touching the proceſs thereof; as for the thing it ſelf to be prepared, what it is, I have elſewhere in this Treatiſe expreſſed; and the preparing of that, is indeed a thing worthy of any ones knowing, and which perhaps hereafter I may make known to ſome. I am of the ſame mind with Sandivogius, *that that fourth Monarchy which is Northern, is dawning, in which (as the ancient Philoſophers did divine) all Arts and Sciences ſhall flouriſh, and greater and more things ſhall be diſcovered then in the three former. Theſe Monarchies the Philoſophers reekon not according to the more potent, but according to the corners of the world, whereof the Northern is the laſt, and indeed is no other then the golden age, in which all tyranny, oppreſſion envie, and covetouſneſs ſhall ceaſe; when there ſhall be one Prince, and one people, abounding with love and mercy, and flouriſhing in peace; which day I earneſtly expect.*

In the mean time, if what I know may add to thy experience, thou haſt it freely; and I hope this will be an occaſion to ſet the more expert Artiſts on work, for the communicating their experiences to the world. One thing (courteous Reader) let me deſire thee to take notice of, viz. *whereas every proceſs is ſet down plain, yet all of them muſt be proceeded in* ſecundum Artem Alchymiſtæ, *(which Art indeed is obtained by experience) and therefore many that work according to the bare proceſs, effect not what they intend; and the reaſon is, becauſe there was ſome Art of the Alchymiſt wanting. To conclude, if thou knoweſt more or better things then theſe, be candid, and impart them; (conſidering that I wrote theſe for them that know them not) if not, accept of the endeavours of thy Friend*

JOHN FRENCH.

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FINIS.

What DISTILLATION is, and the kinds thereof.

BOOK I.

I Shall not ſtand here to ſhew whence the Art of Diſtillation had its original, as being a thing not eaſily to be proved, and if known, yet little conducing to our enſuing Diſcourſe. But let us underſtand what Diſtillation is, of which there are three principal and chief definitions, or deſcriptions.

1. Diſtillation is a certain Art of extracting the Liquor, or the humid part of things by vertue of heat (as the matter ſhall require) being firſt reſolved into a vapour, and then condenſed again by cold.

2. Diſtillation is the art of extracting the ſpiritual, and eſſential humidity from the flegmatick, or of the flegmatick, from the ſpiritual.

3. Diſtillation is the changing of groſs thick bodies into a thinner, and liquid ſubſtance, or ſeparation of the pure liquor from the impure feces.

I ſhall treat of Diſtillation according to all theſe three acceptions, and no otherwiſe: hence I ſhall exclude Sublimation, and Calcination, which are of dry ſubſtances, being particularly

treated of hereafter, unleſs I ſhall by the way make uſe of either, in relation to the perfecting of any kind of Diſtillation.

Now becauſe all, or moſt of theſe Diſtillations are to be performed by heat, it will be neceſſary to underſtand how many degrees of heat there are, and which are convenient for every operation: and they are principally four.

The firſt is only a warmth, as is that of Horſe dung, of the Sun, of warm water, and the vapour thereof, which kind of heat ſerves for putrefaction, and digeſtion.

2. The ſecond is of ſeething water, and the vapour thereof, as alſo of aſhes, and ſerves to diſtill thoſe things which are ſubtile, and moiſt, as alſo for the rectifying of any Spirit or Oil.

3. The third is of ſand and filings of Iron, which ſerves to diſtill things ſubtle, and dry, or groſs and moiſt.

4. The fourth is of a naked fire, cloſe, open, or with a blaſt which ſerves to diſtil Metals and Minerals, and hard gummy things, as Amber, *&c.* I do not ſay ſerves only to diſtil theſe, for many of the former Diſtillations are performed by this heat, as the diſtilling of Spirits and Oils, *&c.* in a Copper-ſtill over a naked fire; but theſe may be diſtilled by the two former degrees of heat; but Minerals and ſuch like cannot but by this fourth degree alone.

Of the matter and form of Furnaces.

THe matter of Furnaces is various, for they may be made either of brick and clay, or clay alone with whites of Eggs, hair, and filings of Iron, (and of theſe, if the clay be fat, are made the beſt, and moſt durable Furnaces) or of Iron, or Copper caſt or forged. The forms alſo of Furnaces are various. The fitteſt form for Diſtillation is round; for ſo the heat of the fire being carryed up equally, diffuſeth it ſelf every way, which happens not in a Furnace of another figure, as four ſquare or triangular, for the corners diſperſe and ſeparate the force of the fire. Their magnitude muſt be ſuch as ſhall be fit for the receiving of the veſſel; their thickneſs ſo great as neceſſity ſhall ſeem to require; only thus much obſerve, that if they be

be made of forged Iron or Copper, they muſt be coated within ſide, eſpecially if you intend to uſe them for a ſtrong fire. They muſt be made with two bottoms diſtinguiſht, as it were, into two forges, the one below which may receive the aſhes, the other above to contain the fire. The bottom of this upper muſt either be an Iron grate, or elſe an Iron plate perforated with many holes, that ſo the aſhes may the more eaſily fall down into the bottom, which otherwiſe would put out the fire. Yet ſome Furnaces have three partitions, as the Furnace for Reverberation, and the Regiſter Furnace. In the firſt and loweſt, the aſhes are received; in the ſecond, the fire is put; and, in the third, of the Furnace for Reverberation, the matter which is to be reverberated. This third ought to have a ſemicircular Cover, that ſo the heat may be reflected upon the contained matter. The bottom of the third and uppermoſt partition of the Regiſter Furnace muſt be either a plate of Iron, or a ſmooth ſtone perforated with holes, having ſtopples of ſtones fitted thereunto, which you may take out or put in, as you would have the heat increaſed or decreaſed. In the top or upper part of all theſe Furnaces where it ſhall ſeem moſt fit, there muſt be two or three holes made, that by them the ſmoak may more freely paſs out, and the air let in to make the fire burn the ſtronger, if need require, or elſe which are to be ſhut with ſtopples made fit to them. The mouths of the forementioned partitions muſt have ſhutters, juſt like an Ovens-mouth, with which you may ſhut them cloſe, or leave them open if you would have the fire burn ſtronger. But in defect of a Furnace, or fit matter to make one, we may uſe a Kettle, or a Pot, ſet upon a Trefoot, as we ſhall ſhew when we come to give you a deſcription of the Furnace and Veſſels. The truth is, a good Artiſt will make any ſhift, yea, and in half a daies time make a Furnace, or ſomething equivalent to it, for any operations.

Of Veſſels fit for Diſtillation.

VEſſels for Diſtillation, are of various matter, and form. For they may be either of Lead, which I altogether diſapprove of, for that they turn the Liquors into a white and milky ſubſtance, beſides the malignity they give to them; or, they may

be of Copper, Iron, or Tin, which are better then the former; or of Jug-metal, or Potters-metal glazed, or Glaſs, which are the beſt of all, where they may be uſed without fear of breaking or melting. Some make them of Silver, but they are very chargeable. They that are able and willing may have the benefit of them.

Of Lutes, for coating of Glaſſes, and for Cloſures, as alſo ſeveral Wayes of ſtopping Glaſſes.

THe beſt Lute is made thus, *viz.* Take of Loam and Sand tempered with ſalt water (which keeps it from cleaving) to theſe add the *Caput Mortuum* of Vitriol, or *Aqua fortis*, and ſcaling of Iron, and temper them well together, and this ſerveth to coat Retorts, or any Glaſs veſſels that muſt endure a moſt ſtrong fire, and will never fail if well made. Some add Flax, beaten Glaſs, and Pots, and Flint, *&c.*

Take unſlaked Lime, and Linſeed Oil, mix them well together, and make thereof a Lute, which will be ſo hard, that no ſpirit will pierce it, and this ſerves for the cloſure of Glaſſes.

Or,

Take Loam and the white of an Egg, mix them into a Paſt, and ſpread it on a cloth. This alſo is a good cloſure.

Or,

Moiſten an Ox Bladder in the white of an Egg beaten to water, or in defect of a Bladder, uſe Paper, and bind them round where the Veſſels are joyned together, one over another two or three times. *Or,*

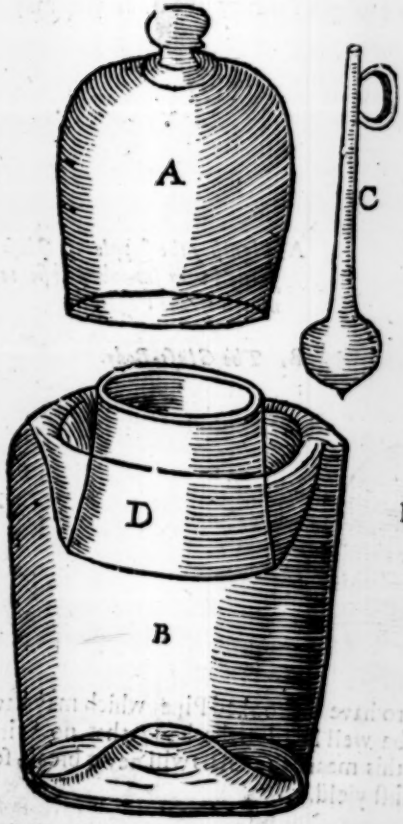
If the ſpirits in the Glaſs be exceeding corroſive, then uſe the *Caput Mortuum* of *Aqua fortis*, Linſeed Oil, and Chalk mixed together.

If a Glaſs be cracked, then wet a linnen cloth in the white of an Egg beaten to water, and lay upon it, and upon that, preſently whileſt it is wet, ſift ſome unſlaked Lime, and preſs it cloſe with your hand; when that is dry, lay on another cloth thus wet, as before, and on it ſift more Lime.

A veſſel may be ſtopt ſo cloſe with Quick-ſilver, that no Spirit can breath forth, by which means the Glaſs will be preſer-

ved

ved from breaking by the inclosed Spirits, (for the head will first yield before the Glass breaks) the Vessel must be made thus. This also is a good way to preserve Spirits already distilled from the air.



A, *Signifies the head or cover.*

B, *The body or vessel it self.*

C, *The little Glass to take out the Liquor that is in the Vessel because it cannot well be poured out, as by reason of the Quick-silver which will be apt to be lost, so by reason of the form of the Vessel it self.*

D, *A false bottom where the Quick-silver must lie, into which the head must be set upon the Quick-silver, that so the Quick-silver may come above the bottome of the Head.*

Alſo you may make ſtopples of Glaſſes ground ſo ſmooth, the ſtopples being faſtened in a Tourne and moyſtned with Emery and water, and ſo turned in the mouth of the bottle till it be fit, then wipe off the Emery, and ſmeer over the ſtopple with a liniment made with fine waſhed Earth and Oil, and ſo polliſh it, that no vapour can get forth by them, as you may ſee by this pattern.

A, *Signifies the ſtopple of Glaſs ground very ſmooth and fit to mouth of the Veſſel.*

B, *The Glaſs-Body.*

But the beſt way is to have a Crooked Pipe, which may have Quick-ſilver in it, and be well luted to the body that no Spirit can get forth: and by this means the Glaſs will never break, for the Quick-ſilver will firſt yield.

A, *The*

A, *The crooked pipe.*

B, *The Glaſs-body.*
Or upon the top of a Glaſs-ſtopple there may be faſtned ſome lead, that if the ſpirit be too ſtrong it will only heave up the Stopple and let it fall down again.

C, *The Glaſs-ſtopple with lead on the top.*

D, *The mouth of the veſſel it ſelf.*

Now the way to nip up a glaſs, or ſeal it up Hermetically, is after this manner.

Put what matter you pleaſe into a bolt-head with a long neck or pipe, put this pipe through a pan that hath a little hole made in the bottome thereof, that the top of it may be three or four inches above the pan, cloſe up the hole round about the pipe with clay; then put coals in the pan, and kindle firſt thoſe that are fartheſt off from the pipe, that the heat may come by degrees to the pipe (for otherwiſe a ſuddain heat will break it) when the pipe is hot, blow the coals about it till it melt, then with a pair of ſhears cut it off where it is melted, and then with a pair of tongues, made hot, cloſe it together.

Note, that after you have cloſed it, you muſt put the burning coals

coals upon the top thereof, and let it thus ſtand till all be cold which muſt be done by degrees; for otherwiſe the glaſs will certainly crack in the place where it is nipped.

Note, that the pan muſt ſtand upon ſome frame, or ſome hollow place, that there may be a paſſage for the pipe to come through it.

Alſo the Bolt-head muſt ſtand upon a Treſoot, or ſome other firm place, according to this Figure.

An Explanation of ſuch hard words, and tearms of art, which are uſed in this enſuing Treatiſe.

Malgamation, is a calcining or corroding metals with Quick-ſilver, and it is done thus: Take any metal except Iron, beaten into thin leaves, or very ſmall powder, mixt it with about

about 8 parts of Quick-silver (which may the better be done if both be heated first) that they may become one uniform masse; evaporate the Quick-silver over the fire, and the metal will be left in the bottom as a thin calx.

Calcination, is a reducing any thing into a Calx, and making it friable, and it may be done

Two wayes -- By Firing -- By reducing into ashes. / By reverberating.

Two wayes -- By Corosion -- By Amalgamation, / Precipitation, / Fumigation or Vaporation, / Cementation or Stratification.

Circulation, is when any liquor is so placed in digestion, that it shall rise up and fall down, rise up and fall down, and so do continually, and thereby become more digested, and mature, for which use for the most part we use a Pellican.

Clarification, is the separating of the gross feces from any decoction or juice, and it is done

Three wayes -- By the white of an Egge, / By Digestion, / By Filtration.

Coagulation, is the reducing of any liquid thing to a thicker substance by evaporating the humidity.

Cohobation, is the frequent abstraction of any liquor, poured oft-times on the feces from whence it was Distilled, by Distillation.

Congelation, is when any liquor being decocted to the height, is afterward, by setling into any cold place, turned into a transparent substance like unto Ice.

Corrosion, is the Calcining of bodies by corrosive things.

D.

Decantation, is the pouring off of any liquor which hath a setling, by inclination.

Deliquium, is the dissolving of a hard body into a liquor,

as ſalt, or the powder of any calcined matter, &c. in a moiſt, cold place.

Deſcenſion, is when the eſſential juice diſſolved from the matter to be diſtilled doth deſcend, or fall downward.

Deſpumation, is the taking off the froth that floats on the top with a ſpoon or feather, or by percolation.

Diſtillation, is the extracting of the humid part of things by vertue of heat, being firſt reſolved into a vapour, and then Condenſed again by cold. Thus it is generally taken; but how more particularly, I ſhall afterward ſhew.

Digeſtion, is a contracting, or maturation of crude things by an eaſie, and gentle heat.

Diſſolution, is the turning of bodies into a liquor by the addition of ſome humidity.

Dulcoration, or dulcification is either the waſhing off the ſalt from any matter that was calcined therewith, with warm water, in which the ſalt is diſſolved, and the matter dulcified: or, it is a ſweetning of things with ſugar, or honey, or ſyrup.

E.

Elevation, is the riſing of any matter in manner of fume, or vapour by vertue of heat.

Evaporation, or *Exhalation*, is the vapouring away of any moiſture.

Exaltation, is when any matter doth by digeſtion attain to a greater purity.

Expreſſion, is the extracting of any liquor by the hand, or by a preſs.

Extraction, is the drawing forth of an eſſence from a corporal matter by ſome fit liquor, as ſpirit of wine, the feces remaining in the bottom.

F.

Fermentation, is when any thing is reſolved into it ſelf, and is rarified, and ripened, whether it be done by any ferment added to it, or by digeſtion only.

Filtration, is the ſeparation of any liquid matter from its feces by making it run through a brown paper made like a tunnel, or a little bag of wollen cloth, or thorough ſhreds.

Fixation,

Fixation, is the making of any volatile, spiritual body endure the fire, and not fly away; whether it be done by often reiterated Distillations, or Sublimations, or by the adding of some fixing thing to it.

Fumigation, is the calcining of bodies by the fume of sharp spirits, whether vegetable or mineral, the bodies being laid over the mouth of the vessel wherein the sharp spirits are.

H.

Humectation or *Irrigation*, is a sprinkling of moisture upon any thing.

I.

Imbibition, is when any dry body drinks in any moisture that is put upon it.

Impregnation, is when any dry body hath drank in so much moisture that it willad mit of no more.

Incorporation, is a mixtion of a dry and moist body together, so as to make an uniform masse of them.

Infusion, is the putting of any hard matter into liquor, for the vertue thereof to be extracted.

Insolation, is digesting of things in the Sun.

L.

Levigation, is the reducing of any hard matter into a most fine powder.

Liquation, is a melting, or making any thing fluid.

Lutation, is either the stopping of the orifices of vessels that no vapour pass out, or the coating of any vessel to preserve it from breaking in the fire.

M.

Maceration, is the same as Digestion.

Maturation, is the exalting of a substance that is immature and crude, to be ripened and concocted.

Menstruum, is any Liquor that serves for the extracting the essence of any thing.

P.

Precipitation, is when bodies corroded by corrosive spirits either by the evaporating of the Spirits remain in the bottome, or by pouring something upon the Spirit, as Oyl of Tartar, or a good quantity of water, do fall to the bottome.

Purification, is a separation of any Liquor from its feces, whether it be done by Clarification, Filtration, or Digestion.

Putrefaction, is the resolution of a mixt body into it self by a natural gentle heat.

Q.

Quintessence, is an absolute, pure and well digested medicine, drawn from any substance, either animal, vegetable, or mineral.

R.

Rectification, is either the drawing of the flegm from the Spirit, or of the Spirit from the flegm, or the exaltation of any Liquor by a reiterated Distillation.

Reverberation, is the reducing of bodies into a Calx by a reflecting flame.

S.

Solution, is a dissolving or attenuating of bodies.

Stratification, is a strewing of corroding powder on plates of metal by course.

Sublimation, is an elevating, or raising of the matter to the upper part of the vessel by way of a subtle powder.

Subtiliation, is the turning of a body into a Liquor, or into a fine powder.

T.

Transmutation, is the changing of a thing in substance, colour, and quality.

V.

Volatile, is that which flyeth the fire.

Rules to be considered in Distillation.

1.

Make choyce of a fit place in your house for the furnace, so that it may neither hinder any thing, nor be in danger of the falling of any thing into it that shall lye over it: for a forcing furnace, it will be best to set it in a chimny, because a strong heat is used to it, and many times there are used brands which will smoak, and the fire being great, the danger thereof may be prevented, and of things of a maligne venenate quality being distilled

distilled in such a furnace, the fume, or vapour, if the glass should break, may be carryed up into the chimny, which otherwise will flye about the room to thy prejudice.

2.

In all kinds of Distillation, the vessels are not to be filled too full: for if you distil Liquors, they will run over; if other solider things, the one part will be burnt before the other part be at all wo ked upon, but fill the fourth part of gourds, the half of Retorts, the third part of copper vessels, and in rectifying of spirits fill the vessel half full.

3.

Let those things which are flatulent, as wax, rosin, and such like, as also those things which do easily boyle up, as honey, be put in a lesser quantity, and be distilled in greater vessels, with the addition of salt, sand, or such like.

4.

There be some things which require a strong fire, yet you must have a care that the fire be not too vehement for fear their nature should be destroyed.

5.

You must have a care that the lute with which vessels are closed do not give vent, and alter the nature of the Liquor, especially when a strong fire is to be used.

6.

Acid Liquors have this peculiar property that the weaker part goes forth first, and the stronger last; but in fermented and liquors, the Spirit goeth first, then the Phlegm.

7.

If the liquor retain a certain Empyreuma, or smatch of the fire, thou shalt help it by putting it into a glasse close stopt, and so exposing it to the heat of the sun, and now and then opening the glasse that the fiery impression may exhale, or else let the glass stand in a cold moist place.

8.

When you put water into a seething Balneum wherein there are glasses let it be hot or else thou wilt endanger the breaking of the glasses.

9.

When thou takeſt any earthen, or glaſs veſſel from the fire, expoſe it not to the cold aire too ſuddenly for fear it ſhould break.

10.

If thou wouldeſt have a Balneum as hot as aſhes, put ſand or ſawduſt into it, that the heat of the water may be therewith kept in, and made more intenſe.

11.

If you would make a heat with horſe-dung, the manner is this, *viz.* make a hole in the ground, then lay one courſe of horſe-dung a foot thick, then a courſe of unſlaked lime half a foot thick, then another of dung, as before, then ſet in your veſſel, and lay round it lime and horſe-dung mixt together; preſs it down very hard; you muſt ſprinkle it every other day with water, and when it ceaſeth to be hot, then take it out and put in more.

12.

Note, that alwayes the ſand or aſhes muſt be well ſifted, for otherwiſe a coal or ſtone therein may break your glaſs.

13.

The time for putrefaction of things is various: for if the thing to be putrefied be vegetables and green, leſs time is required; if dry, a longer; if Minerals, the longeſt of all. Thus much note, that things are ſooner putrefied in cloudy weather then in fair.

14.

If thou wouldeſt keep Vegetables freſh and green all the year, gather them in a dry day, and put them into an earthen veſſel, which you muſt ſtop cloſe, and ſet in a cold place: and they will, as ſaith *Glauberus*, keep freſh a whole year.

15.

Do not expect to extract the eſſence of any Vegetable, unleſs by making uſe of the feces, left after diſtillation: for if you take thoſe feces, as for example, of a Nettle, and make a decoction thereof, and ſtrain it and ſet it in the froſt, it will be congealed and in it will appear a thouſand leaves of Nettles with their prickles, which when the decoction is again reſolved by heat, vaniſh

vaniſh away, which ſhews that the eſſence of the Vegetables lies in the ſalt thereof.

16.

In all your operations, diligently obſerve the proceſſes which you read, and vary not a little from them, for ſometimes a ſmall miſtake or neglect ſpoils the whole operation, and fruſtrates your expectation.

17.

Try not at firſt experiments of great coſt, or great difficulty; for it will be a great diſcouragement to thee, and thou wilt be very apt to miſtake.

18.

If any one would enter upon the practices of Chymiſtry, let him apply himſelf to ſome expert artiſt for to be inſtructed in the manuall operation of things: for by this means he will learn more in two moneths, than he can by his practiſe and ſtudy in ſeven years, as alſo avoid much pains and coſt, and redeem much time which elſe of neceſſity he will loſe.

19.

Enter not upon any operation, unleſs it be conſiſtent with the poſſibility of nature, which therefore thou muſt endeavour, as much as poſſibly may be, to underſtand well.

20.

Do not interpret all things thou readeſt according to the literal ſenſe; for Philoſophers when they wrote any thing too excellent for the vulgar to know, expreſſed it enigmatically, that the ſons of Art only might underſtand it.

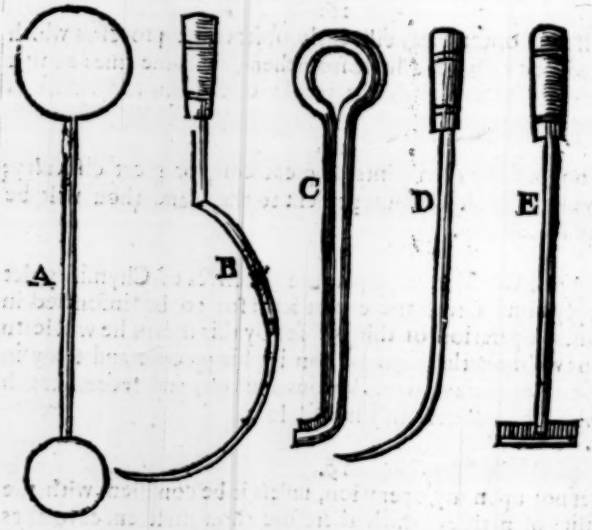
21.

In all thy operations, propoſe a good end to thy ſelf, as not to uſe any excellent experiment that thou ſhalt diſcover, to any ill end, but for the publick good.

22.

It will be neceſſary that thou knoweſt all ſuch inſtruments that thou ſhalt uſe about thy Furnace and Glaſſes, whereof

whereof ſome are already expreſſed, and ſome more ſhall be here deſcribed.



A, *Signifies an iron rod with two iron rings at the ends thereof, which muſt be heated red hot, and applyed to that part of the glaſs which thou wouldeſt break off. When thou haſt held it there ſo long till the glaſs be very hot, then take it off, and drop ſome cold water, where thou wouldeſt have it break off, and it will preſently crack in ſunder. Theſe rings are for ſuch glaſſes as will go into them: Thou muſt have divers of this ſort, even of all ſizes.*

B, *An iron hook which muſt be heated hot and applyed to any great glaſs that will not go into a rings this hook hath a wooden handle.*

C, *A pair of tongs which are for divers uſes.*

D, *A crooked iron to rake betwixt the grates to clear them.*

E, *An iron Rake to rake the aſhes out of the aſh hole.*

A thread dipt in melted brimſtone and tyed about a glaſs, and then fired, may ſerve in ſtead of the iron rings, and the hook.

Common

Common Diſtilled ſimple waters, are made thus.

TAke what hearbs or flowers you pleaſe, put them into a common cold Still, and let them diſtil gently.

This is the form of a common cold Still.

But note, that this kind of water is but the flegm of the Vegetable which you diſtil, and hath very litle vertue or odour in it; only roſes and mints, and two or three more, have an odour; but all beſides, have as little vertue as common diſtilled water.

I do not deny, but that it may be ſo ordered, that theſe kinds of waters may partake both of the ſmell and ſtrength of their Vegetables in a good meaſure, and it is thus:

To make waters in a cold Still that ſhall have the full ſmell and vertue of the Vegetable.

TAke what hearbs, flowers, or roots you pleaſe (ſo that they be green) bruiſe them and mix with them ſome leaves, and let them ſtand cloſe covered for four or five dayes: then diſtil them after the manner aforeſaid.

Another way to make Water taſt and ſmell ſtrong of its Vegetable.

WHen you have Diſtilled any Vegetable in a cold Still, after the uſual manner (ſo that you take heed you dry not the hearb too much, which you may prevent by putting a brown paper in the bottom of the Still, giving it a gentle fire, and turning the cake before it be quite dryed) take the cakes that remain in the bottom of the Still, and the water that is diſtilled from thence (having a good quantity thereof) and put them into a hot Still, and let them ſtand warm for the ſpace of 24 hours, then diſtil them. Then if you would have the water ſtrong, put the ſaid water into more freſh cakes, caſting away the other, and do as before. This is the trueſt and beſt way to have the Water of any Vegetables. Alſo, thou ſhalt by this way purchaſe ſome Oyl, which is to be ſeparated and to be kept by it ſelf.

To make water, at any time of the year in a cold Still, without green hearbs, ſo that the water ſhall ſmell ſtrong of the hearb.

PUt fair water into the body of the cold Still, then hang a bag full of that hearb that thou wouldeſt have the water ſmell of, being firſt dryed, or ſeed or root thereof firſt bruiſed, then make a ſtrong fire under the Still.

Note, that thoſe Vegetables, of which the water is made after this and the former manner, muſt be of a fragrant ſmell, for ſuch as have but little or no ſmell, cannot yield a water of any conſiderable odour.

Another way to make a water taſte, and ſmell ſtrong of its Vegetables.

TAke of the dry hearb, or ſeed, or root, bruiſed; to a pound of each, put 12 pints of Spring-water, diſtil them in a hot Still or Alembick; and the water that is diſtilled off, put upon more of the freſh hearbs, ſeeds, or roots; do this three or four times

times, and thou ſhalt have a water full of the vertue of the Vegetable, being almoſt as ſtrong as a ſpirit.

To make the Water of Roſes, or other Flowers, of a grateful and pleaſant ſmell, and that ſhall burn like unto ſpirit of Wine.

AS out of all other things, and eſpecially nouriſhing things, may be had, by the help of Fermentation, a burning and fragrant ſpirit; ſo alſo, may be had out of Roſes, which are commonly accounted cold.

Therefore take Damask Roſes, gathered in a cleer air, after the dew is off, beat them very ſmall, put them in a glaſs-veſſel, and ſet them cloſe ſtopt in a Cellar, that there they may ferment; and when they ſmell or taſt ſour, take of the ſaid Flowers as much as you pleaſe, and diſtill them in *Balneo Mariæ*; and the water thence diſtilled, pour on another part of the ſaid Roſes, and diſtill it again, and ſo proceed upon another part of the Roſes, untill all the whole quantity of the fermented Roſes be diſtilled, alwayes keeping the feces that remain in the bottom. Then take all the water that came from the Roſes, and diſtill it in *Balneo Mariæ*, and diſtil thence a twelfth part or thereabouts; which, if you pleaſe, you may rectifie: So have you a moſt grateſull and moſt odoriferous water, which burneth like unto ſpirit of Wine.

Its Vertues.

It exceedingly reviveth the heart and refreſheth the Spirits: It is alſo much uſed externally for its odoriferous Nature.

To make the water of the flowers of Jaſmin, Honey-ſuckles, or Woodbine, Violets, Lillies, &c. retain the ſmell of their flowers.

The reaſon why theſe flowers, in the common way of Diſtillation yield a water of no fragrancy at all, although they themſelves are very odoriferous, are, either becauſe, if a ſtronger fire

be made in the diſtilling of them, the groſſer, and more earthy Spirit cometh out with the finer, and troubleth it, as it is in caſe the flowers be cruſhed or bruiſed (where the odour upon the ſame account is loſt) or becauſe the odoriferous Spirit thereof being thin, and very ſubtle riſeth with a gentle heat, but for lack of body, vapours away. The art therefore that is here required is, To prevent the mixtion of the groſſer ſpirit, with the finer, and to give ſuch a body to the finer that ſhall not embaſe it: and it is thus:

Take of either of the aforeſaid flowers, gathered freſh, and at noon in a fair day, let them not at all be bruiſed. Infuſe a handful of them in two quarts of white-wine (which muſt be very good, or elſe you labour in vain) for the ſpace of half an hour; then take them forth, and infuſe in the ſame wine, the ſame quantity of freſh flowers: this do eight or ten times; but ſtill remember that they be not infuſed above half an hour, (for, according to the rule of infuſion, a ſhort ſtay of the body that hath a fine Spirit, in the liquor receiveth the Spirit: but a longer ſtay confoundeth it, becauſe it draweth forth the earthly part withal, which deſtroyeth the finer:) then diſtil this liquor (all the flowers being firſt taken out) in a glaſſe-gourd, in a very gentle Balneo, or over a vapour of hot water, the joynts of the glaſs being very well cloſed, and thou ſhalt have a water of a moſt fragrant odour. By this means the Spirit of the wine which ſerves to body the fine odoriferous Spirit of the flowers ariſeth as ſoon as the fine Spirit it ſelf, without any earthineſs mixed with it.

Note, that in defect of Wine, *Aqua vitæ* will ſerve; alſo ſtrong-beer; but not altogether ſo well, becauſe there is more groſs earthineſs in it than in wine.

The water of either of theſe flowers is a moſt fragrant perfume, and may be uſed as a very delicate ſweet water, and is no ſmall Secret.

A Furnace with his vessels, to distill liquors with the steam of boyling water.

A, *Sheweth the head of the Alembick.*

B, *The body thereof, placed in a brass vessel made for that purpose.*

C, *A brass vessel perforated in many places to receive the vapour of the water. This vessel shall contain the Alembick compassed about with sawdust, not only that it may the better and longer retain the heat of the vapour, but also lest it should be broken by the hard touch of the brasen vessell.*

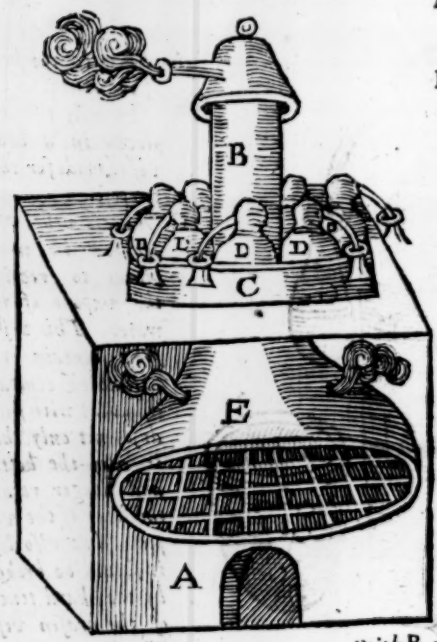
D, *Shewes the brass vessell containing the water as it is plac't in the Furnace.*

E, *The Furnace containing the vessell.*

F, *A Funnell by which you may now and then powre in water, instead of that which is vanisht and dissipated by the heat of the fire.*

G, *The Receiver.*

The delineation of a Balneum Mariæ *which may alſo ſerve for to diſtil with aſhes.*



A, *Shews the Furnace, with the hole to take forth the Aſhes.*

B, *Shews another furnace, as it were ſet in the other: now it is of Braſs, and runs through the midſt of the kettle made alſo of braſs, that ſo the contained water or aſhes may be the more eaſily heated.*

C, *The kettle wherein the water, aſhes, or ſand are contained.*

D, *The Alembick ſet in the water, aſhes, or ſand, with the mouths of the receivers.*

E, *The bottome of the ſecond braſs furnace, whoſe top is marked with* B, *which contains the fire.*

A water out of Berries, is made thus:

TAke of what berries you pleaſe being full ripe; put them into a gourd-glaſs, ſtrewing upon them a good quantity of powdered ſugar, cover them cloſe, let them ſtand three weeks or a moneth, then diſtil them in *Balneo*.

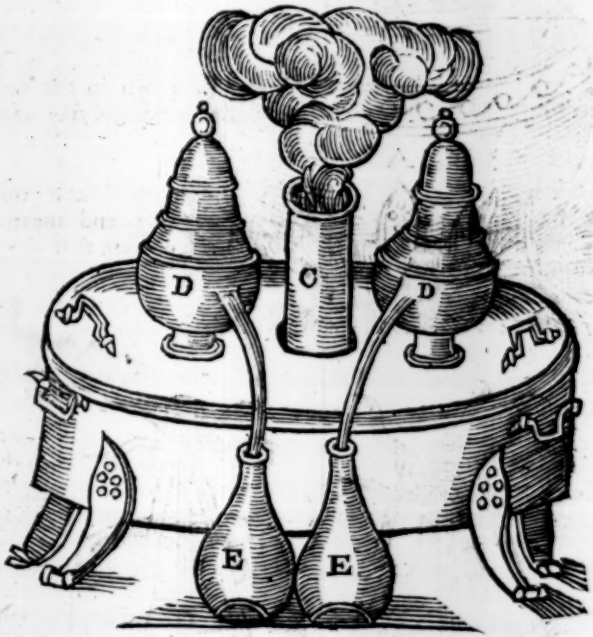
After this manner Strawberries, Raſpberries, Elderberries, and Black-cherries, may be diſtilled: But note, that ſuch as have ſtones muſt firſt be bruiſed together with their ſtones.

A

A ſweating Water made of Elder-berries.

TAke of Elder-berries as many as you pleaſe, preſs out the juice thereof; to every gallon thereof, put a pint of White-wine-vinegar, of the lees of White-wine a pint: let them ſtand in a wooden veſſel, which thou muſt then ſet in ſome warm place neer the fire ſide for the ſpace of a week, then diſtil them in a hot Still, or Alembick. } nola.

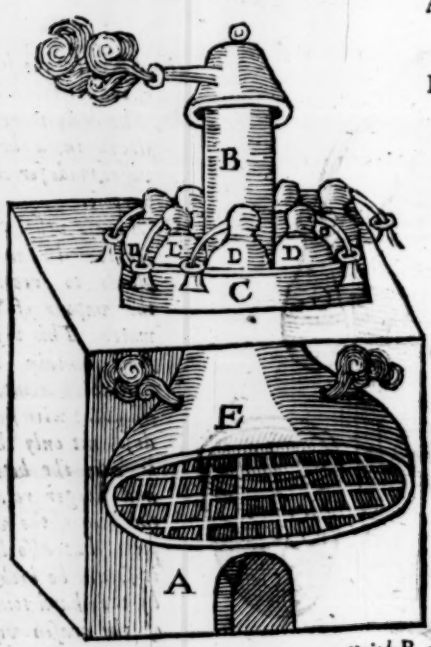
The Furnace for a Balneum Mariæ, *with the Alembicks and their Receivers.*



A, *Shews the braſs kettle full of water.*
B, *The cover of the kettle perforated in two places, to give paſſage forth to the veſſels.*
C, *A pipe or Chimney added to the kettle, wherein the fire is contained to heat the water.*
D, *The Alembick conſiſting of its body and head.*
E, *The Receivers, wherein to the diſtilled liquor runs.*

The

The delineation of a Balneum Mariæ *which may alſo ſerve for to diſtil with aſhes.*



A, *Shews the Furnace, with the hole to take forth the Aſhes.*
B, *Shews another furnace, as it were ſet in the other: now it is of Braſs, and runs through the midſt of the kettle made alſo of braſs, that ſo the contained water or aſhes may be the more eaſily heated.*
C, *The kettle wherein the water, aſhes, or ſand are contained.*
D, *The Alembick ſet in the water, aſhes, or ſand, with the mouths of the receivers.*
E, *The bottome of the ſecond braſs furnace, whoſe top is marked with* B, *which contains the fire.*

A water out of Berries, is made thus:

TAke of what berries you pleaſe being full ripe; put them into a gourd-glaſs, ſtrewing upon them a good quantity of powdered ſugar, cover them cloſe, let them ſtand three weeks or a moneth, then diſtil them in *Balneo*.

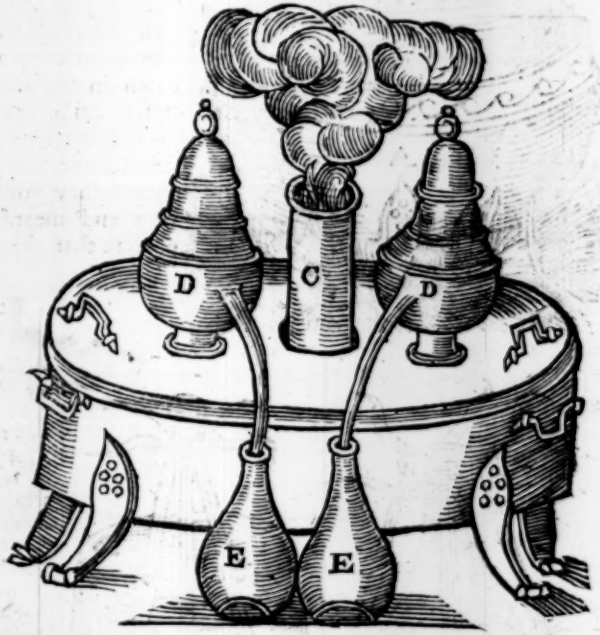
After this manner Strawberries, Raſpberries, Elderberries, and Black-cherries, may be diſtilled: But note, that ſuch as have ſtones muſt firſt be bruiſed together with their ſtones.

A

A sweating Water made of Elder-berries.

TAke of Elder-berries as many as you please, press out the juice thereof; to every gallon thereof, put a pint of White-wine-vinegar, of the lees of White-wine a pint: let them stand in a wooden vessel, which thou must then set in some warm place neer the fire side for the space of a week, then distil them in a hot Still, or Alembick.

The Furnace for a Balneum Mariæ, *with the Alembicks and their Receivers.*



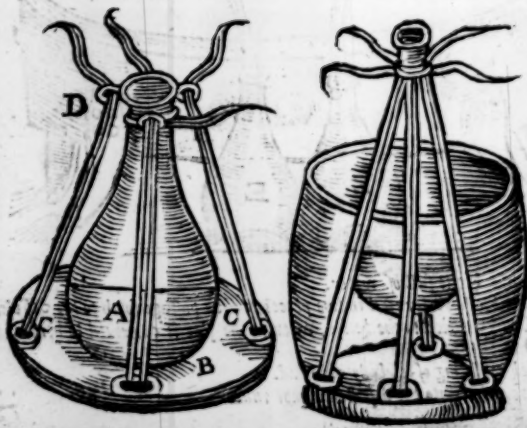
A, *Shews the brass kettle full of water.*
B, *The cover of the kettle perforated in two places, to give passage forth to the vessels.*
C, *A pipe or Chimney added to the kettle, wherein the fire is contained to heat the water.*
D, *The Alembick consisting of its body and head.*
E, *The Receivers, whereinto the distilled liquor runs.*

The

The effigies of another Balneum Mariæ, *not so easie to be removed as the former.*

A, *Shews the vessel or Copper that contains the water.*
B, *The Alembick set in water.*

But lest the bottome of the Alembick being half full, should float up and down in the water, and so strike against the sides of the Kettle, I have thought good to shew you the way and means to prevent that danger.



A, *Shews the Vessel or glass Alembick.*
B, *A plate of Lead whereon it stands.*
C, *Strings that bind the Alembick to the plate.*
D, *Rings through which the strings are put, to fasten the Alembick.*

In

In defect of a Furnace for a Balneum, *you may make uſe of a pot ſet upon a trefoot, after this manner.*

An ounce or two of this water of Elder-berries is a very excellent Sudorifick, and is very good in all diſeaſes that require ſweat; as alſo in Hydropical diſeaſes.

Water out of rotten Apples, is made thus.

TAke as many rotten Apples as you pleaſe, bruiſe them, and diſtil them either in a common cold-Still, or gourd glaſſes in *Balneo.*

This water is of greater uſe in feavers, and hot diſtempers, than the common diſtilled waters of any cold Vegetables.

It is very good in any hot diſtemper of the reins, and ſharpneſs of Urine.

It is very good in the inflammations of the eyes.

The ſimple Water of Succory, is made thus.

TAke the hearb and roots of Succory, gathered about the middle of *May*, twelve pounds, pownd it or cut it ſmall, to which pour twenty pounds of Common water, and then macerate it

three dayes; out of which you may diſtil eight pounds, in a hot Still.

Its vertues.

It is a very excellent water for the Liver, opening, diuretick, attenuating, and ſomewhat refrigerating.

The water of Fennel.

TAke Fennel-ſeeds bruiſed ſmall, four pounds, common water 24 pound; to which add, Tartar or common Salt 2 ounces: macerate it in a cold place; then diſtil it in a copper Still, with its Refrigeratory: So have you both the Water and Oyl which muſt be ſeparated from the water.

Its vertues.

Fennel-water is a good Reſtorative, its Diuretick, encreaſeth Milk, it cleanſeth the Breſt from the abundance of evils proceeding from thick humours.

To make Cinnamon water.

TAke Cinnamon groſly bruiſed one pound, to which pour Roſe water and Whitewine, of each three pound, macerate the ſame in a fit place of warm dung or ſuch like, as long as is neceſſary (or about 14 dayes, every day ſtirring it) then diſtil the ſame in *Balneo Mariæ*. Separate the firſt water, which is the beſt; alſo, the ſecond water, and then the third water, keep each apart; the ſecond being fit to be uſed in the Menſtruum for the Maceration; the third, is an unprofitable Flegm to be caſt away.

Its vertues.

By its penetrating opening power, it removes all obſtructions of the inward parts; it nouriſheth the natural heat, and helpeth digeſtion; for which reaſon it is frequently uſed in the reſtoring of decayed Nature, in the renewing of the Spirits and ſtrengthning of the Bowels. The Doſe is a ſpoonful, either *per ſe*, or mixt with other things.

The Acid water, of Oak, Juniper, Guajacum, Box, &c. is made thus.

TAke the Sawduſt of Oak, the Raſping of Juniper, Guajacum, or the ſmall bits of Box, diſtill them in a Glaſs Retort in Sand until the matter be dry; afterwards ſeparate the Oyl from the water, with filtring paper (the black oyl remaining in the paper) rectifie the water in Sand, either from Colcothar, or Sea-ſalt, or its own Aſhes; afterwards ſeparate the Flegm by Diſtillation (in *Balneo Mariæ*) from the Acid Liquor, about a third part whereof, (that which cometh laſt over) is to be kept

For theſe uſes:

To diſſolve Corals and Pearl, and to extract Tinctures: Eſpecially, that of Guajacum, for that it evidently helpeth thoſe that have need thereof, in Scabineſſes, the French Pox, Ringworm, and other putrifying diſeaſes of the bloud. The Doſe is half a dram, or a dram.

How to make Aqua vitæ, *and ſpirit of wine out of Wine.*

TAke of what wine you pleaſe, put it into a Copper Still, two parts of three being empty, diſtil it with a worm, until no more ſpirit come off, than this Spirit will ſerve for the making of any Spirits out of Vegetables: but if thou wouldeſt have it ſtronger, diſtil it again, and half will remain behind as an inſipid flegm: and if thou wouldeſt have it yet ſtronger, diſtil it again, for every Diſtillation will leave behind one moity of flegm or thereabout; So ſhalt thou have a moſt pure and ſtrong Spirit of wine.

A hot Still.

A, *Sheweth the bottome which ought to be of Copper.*
B, *The Head.*
C, *The barrel filled with cold water to refrigerate and condenſate the watey and oyl that run through the pipe or worm that is put through it.*
D, *A pipe of braſs or pewter, or rather a worm of Tin running through the barrel.*
E, *The Alembick ſet in the furnace with the fire under it.*

How to make Aqua vitæ *out of Beer.*

TAke of ſtale ſtrong beer, or rather, the grounds thereof, put it into a copper Still with a worm, diſtil it gently (or otherwiſe it will make the head of the Still fly up) and there will come forth a weak Spirit, which is called, low Wine: of which, when thou haſt a good quantity, thou maiſt diſtil it again of it ſelf, and there will come forth a good *Aqua vitæ*. And if thou diſtilleſt it two or three times more, thou ſhalt have as ſtrong a Spirit as out of Wine; and indeed, betwixt which, and the Spirit of Wine, thou ſhalt perceive none or very little difference.

How

How to rectifie Spirit of Wine, or Aqua vitæ.

Diſtil it in *Balneo* until the laſt drop that comes off be hot, and full of Spirit.

Note, that every time there will remain in the bottom a quantity as weak as water.

Note alſo, that every time thou diſtilleſt it, when thou perceiveſt that a very weak water comes over, thou ſhalt then end that Diſtillation.

To make the Magiſtery of Wine, which will be one of the greateſt Cordials, and moſt odoriferous Liquor in the World.

Take good old rich Canary Wine, put it into a glaſs-veſſel that it may fill the third part thereof, nip it up and ſet it in a continual heat of Horſe-dung for the ſpace of four months: then in froſty weather ſet it forth into the coldeſt place of the air you can, for the ſpace of a month, that it may be congealed: And ſo the cold will drive in the true Spirit of the Wine into the Center thereof, and ſeparate it perfectly from its flegm. That which is congealed, caſt away; but that which is not congealed, eſteem as the true Spirit of Wine. Circulate this in a Pellican, with a moderate heat, for the ſpace of a month, and thou ſhalt have the true Magiſtery or Spirit of Wine, which, as it is moſt cordial, ſo alſo moſt Balſamical, exceeding all Balſoms for the cure of Wounds.

The form of a Pellican.

The matter muſt be put in at the top which afterwards muſt be cloſed up.

To make an other Magiſtery of Wine, that a few drops thereof ſhall turn Water into perfect Wine.

TAke of the beſt Canary Wine, as much as you pleaſe, let it ſtand in putrefaction forty dayes, then diſtil it in *Balneo*, and there will come forth a Spirit, and, at laſt, an Oyl; ſeparate the one from the other, and rectifie the Spirit. Set the Oyl again in putrefaction forty dayes, and then diſtil it. The feces that are left after the firſt Diſtillation, will yield a volatile Salt, which muſt be extracted without Calcination, with the flegm of the Spirit, purifie it well, then impregnate the Salt with its Spirit, and digeſt them; then add the Oyl, and digeſt them together till they become a red powder: which you may uſe as it is, or elſe ſet it in a cellar till it be diſſolved into a liquor, and a few drops thereof will do as aboveſaid.

To make an Oyl of Wine.

TAke weak Spirit of Wine, diſtil it in a veſſel of a long neck, then pour on this Spirit again upon the flegm, diſtil it again, do this ſeveral times, and you ſhall ſee the Oyl of the Wine ſwim on the flegm, which flegm you muſt ſeparate from the Oyl by a tunnel.

If this Oyl be afterward circulated for a month, it will thereby become moſt odoriferous, and of ſingular vertue, and good being both very Cordial, and Balſamical.

To extract the Spirit out of Wine by the Spirit of Wine.

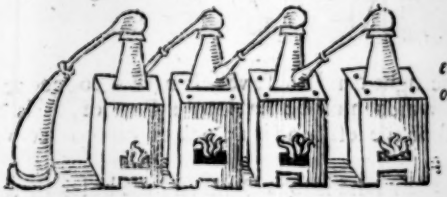
PUt Spirit of Wine well rectified upon Canary or Rheniſh Wine, ſo cautiouſly that it may not mix with, but ſwim upon the Wine; let them ſtand without ſtirring, the ſpace of 48 hours. Then will the Spirit, that is in the Wine, riſe up, and join it ſelf to the Spirit that ſwims on the top, which you ſhall perceive by the weakneſs of the flegm, which you muſt let run out at a tap, which muſt be made in the bottom of the veſſel for that purpoſe, and ſo be ſeparated from the Spirit.

To

To make a very ſubtil Spirit of Wine at the firſt diſtilling.

TAke white or wheaten bread as ſoon as it comes forth of the Oven, break it in the middle (*i e.*) the upper ſide from the lower ſide, and hang it hot in a Glaſs-veſſel over Canary Wine, but ſo that it touch not the Wine; then cover the veſſel, and let it ſo ſtand until the bread ſwell and be ſufficiently impregnated with the Spirit of Wine, which it will attract from the Wine: then take out that bread and put in more, till you have a conſiderable quantity of bread thus moiſtened. Then put this bread into a Glaſs-body, and diſtil it in *Balneo*, and you ſhall have a very ſubtile Spirit, which you may yet rectifie by Circulation.

By Furnaces and Veſſels made after this inſuing figure, there may be made four rectifications of any Spirit at once.



Theſe veſſels may either ſtand in aſhes, or in Balneo.

The manner of Diſtilling in Wooden Veſſels.

A, *Signifieth the veſſel wherein the copper veſſel lyeth.*

B, *The copper veſſel, part of which is in the Furnace, and part in the veſſel of Wood.*

C, *The veſſel of Wood, wherein the matter muſt be that is Diſtilled.*

D, *The cooling veſſel with the worm.*

E, *The Receiver.*

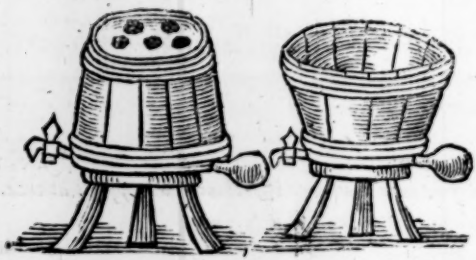
F, *The Treſoot whereon the veſſel ſtandeth.*

Note

Note, that the greater the copper veſſel is, and the leſs the woodden is, the ſooner will the Liquor boil.

This Furnace ſhows how to draw forth Spirits and Waters out of Vegetables and Animals, with little coſt and in ſhort time.

A Balneum and a boiling Veſſel made of Wood.



Note, that on the right hand, theſe veſſels have a copper veſſel hanging forth, which muſt be ſet into a Furnace, as is above ſhewed; and on the left hand is a Cock or Tap to let out the water.

The veſſel on the left hand is for a *Balneum*, the holes in the cover thereof are either to ſet in veſſels over the fume of the water, or for the necks of the glaſſes ſet in the *Balneo* to paſs through.

The veſſel on your right hand is to boil water in for any uſe, alſo to brew in.

The Spirit of any Vegetable is made thus.

TAke of what Vegetable you pleaſe, two pound, macerate it in ſix Gallons of *Aqua vitæ*, or low Wines, or Sack, for the ſpace of 24 hours; then let them be diſtilled by an Alembick, or hot Still, putting to every pound of the Spirit two ounces of moſt pure Sugar.

Note, that the two firſt pints may be called the ſtronger Spirit, and the reſt the weaker Spirit, or indeed the water, but if they be

be both mixed together, they will make an excellent midling Spirit, for the former hath more of the Spirit of Wine, and the latter more of the vertue and odour of the Vegetable.

After this manner may be made the Spirit of

the { Hearbs, Flowers, Roots, Seeds, of Vegetables, Berries, Barks, Rinds, and Spices.

Note, that Hearbs and Flowers must be cut small, the rest bruised.

If you would make it stronger, then take all the foresaid Spirit, and as much more Sack or low Wines, and put them upon the same quantity of fresh Vegetables, and distil them; repeat this three or four times if thou pleasest.

Note also, that the Vegetable must be dryed; because else the Spirit will not be so good, as if otherwise.

The Form of an Alembick.

A, *Signifies the vessel which must be of Copper, in which the matter is contained, and which must be set over a naked fire.*

B, *Signifies the Belly that is fastened to the Neck, that the Neck may the more commodiously be applyed to the large mouth of the vessel. But it may be so ordered that the mouth of the upper vessel and lower vessel may be so fitted that they shall not need this Belly.*

C, *The long Neck of the upper vessel, whereby the Spirit or Water passing is somewhat cooled.*

D, *The Head.*

E, *The vessel that compasseth the Head, into which cold water is continually poured after the heating.*

F, *The long Receiver.* G, *The top or cock letting out the water when it is hot.*

The Spirit of any Vegetable may ſodainly, at any time of the year be made thus.

Take of what Hearb, Flower, Seeds, or Roots you pleaſe. Fill the head of the Still therewith, then cover the mouth thereof with a coorſe Canvas and ſet it on the Still, having firſt put into it, Sack or low Wines. Then give it fire.

If at any time thou wouldſt have the Spirit be of the colour of its Vegetable, then put of the flowers thereof dryed a good quantity in the noſe of the Still.

To make any Vegetable yield its Spirit quickly.

Take of what Vegetables you pleaſe, whether it be the ſeed, flower, root, fruit, or leaves thereof, cut or bruiſe them ſmall, then put them into warm water, put yeſt or barm to them, and cover them warm, and let them work three dayes as doth Beer, then diſtil them, and they will yield their Spirit eaſily.

To reduce the whole Hearb into a Liquor which may well be called the Eſſence thereof.

Take the whole Hearb with flowers, and roots, make it very clean: then bruiſe it in a Stone Morter, put it into a large Glaſs veſſel, ſo that two parts of three may be empty: then cover it exceeding cloſe, and let it ſtand in putrefaction in a moderate heat, the ſpace of half a year, and it will be all turned into a water.

To make an Eſſence of any Hearb, which being put into a Glaſs, and held over a gentle fire, the lively form and Idea of the Hearb will appear in the Glaſs.

Take the foregoing water, and diſtil it in a gourd-glaſs (the joynts being well cloſed) in aſhes, and there will come forth a Water and an Oil, and in the upper part of the veſſel will hang a volatile Salt. The Oyl ſeparate from the Water, and keep by it ſelf;

ſelf; with the water purifie the volatile Salt by diſſolving, filtring, and coagulating. The Salt being thus purified, imbibe with the ſaid Oyl, until it will imbibe no more, digeſt them well together for a month in a veſſel hermetically ſealed. And by this means you ſhall have a moſt ſubtil eſſence, which being held over a gentle heat will fly up into the Glaſs, and repreſent the perfect Idea of that Vegetable whereof it is the eſſence.

The true eſſence, or rather Quinteſſence, of any Hearb, is made thus.

When thou haſt made the Water and Oil of any Vegetable, firſt calcine (*i.e.*) burn to aſhes the remainder of the Hearb; with the Aſhes make a Lye by pouring its own water thereon; when thou haſt drawn out all the ſtrength of the Aſhes, then take all the Lye, being firſt filtred; and vapour it away, and at the bottom thou ſhalt find a black Salt: which thou muſt take and put into a Crucible, and melt it in a ſtrong fire (covering the Crucible all the time it is melting) after it is melted, let it boil half an hour or more, then take it out, and beat it ſmall, and ſet it in a Celler on a Marble ſtone, or in a broad Glaſs, and it will all be reſolved into a Liquor; this Liquor filter, and vapour away the humidity till it be very dry, and as white as ſnow. Then let this Salt imbibe as much of the Oil of the ſame Vegetable as it can, but no more, leſt thou labour in vain. Then digeſt them together till the Oyl will not riſe from the Salt, but both become a fixed powder melting with an eaſie heat.

To extract the Quinteſſence of all Vegetables.

Take of what Spices, Flowers, Seeds, Hearbs, Woods, you pleaſe, put them into a rectified Spirit of Wine; let the Spirit extract in digeſtion, till no more feces fall to the bottom, but all their eſſence is gone into the Spirit of Wine, upon which, being thus impregnated, pour a ſtrong Spirit of Salt, and digeſt it in *Balneo* till an Oyl ſwim above, which ſeparate with a Tunnel, or draw off the Spirit of Wine in *Balneo*, and the Oyl will remain clear at the bottom, but before the Spirit of Wine is abſtracted, the Oyl is bloud red, and a true Quinteſſence.

An excellent Essence of any Vegetable, may be made thus.

Take of the distilled Oyl of any Vegetable, with it imbibe the best Manna, being very well depurated, untill it will imbibe no more, then digest them a month, and thou shalt have the true balsom and excellent Essence of any Vegetable.

This hath the vertues of the Vegetable, whereof it was made, but in a more eminent manner.

The depuration of Manna for this use is a great Secret.

Water or Spirit of Manna, is made thus:

Take of the best Manna one part, of Nitre two parts, put them into an Ox Bladder, and tying it close, put it into warm water to be dissolved. Distil this water in an Alembick, and there will come forth an insipid water, sudorifical and laxative.

The Tincture of dryed Roses, is thus made.

Put one ounce of Red-Roses dryed, in four pound of warm water, to which add two drams, or thereabouts, of Spirit of Vitriol, or Sulphur, and within three or four hours the water will be very red; which filter or decant, and dissolve therein twelve ounces of Sugar.

So have you a true cooler of the Liver, in Fevers and other unnatural heats, when it first seizeth them, its use is great; it is also a great comforter of the Liver, by reason of the Spirit of Vitriol; and of the Ventricle, because it bringeth a good digestion.

The Tincture of Violets.

Take the flowers of Violets bruised, macerate them in their own Water, or in the Oyl of Sugar (hereafter described) then press it, and strain it, until the Tincture be according to your desire. You may also add Spirit of Vitriol, as before in the Tincture of Roses.

Or,

Or, you may put flowers in the pipe of the Alembick, when you diſtil its own water, which will take a tincture with it.

Or, you may have a bellyed pipe, between the pipe of the Alembick and the Receiver, in which put your freſh Violet flowers; in the body of the Alembick put your bruiſed flowers to diſtil, which water paſſing through, the other flowers carryeth the tincture with it.

The Tincture of Saffron.

It is made with ſpirit of Wine, being powred thereon ſo often until it hath attracted the whole tincture, and that which is left remain whitiſh: Filter the tincture, and abſtract the Spirit of Wine, with a gentle heat in *Balneo Mariæ*.

Its uſe.

It hath various and excellent faculties, and wonderfully refreſheth and reſtoreth the Spirits, eſpecially in ſwooning fits, if one drop thereof be given in broth or white wine.

The Tincture of Rhubarb.

Take Moncks-Rhubarb cut in pieces, one ounce, pour thereon the Oyl of bitter Almonds, about three fingers high, or four ounces; ſet in the heat of the Sun a Philoſophical month, or 40 dayes, and ſo the Oyl takes the Eſſence of the Rubarb to its ſelf; then preſs it, and to that which is expreſſed, add ſpirit of Wine rectified, and leave it for ſome dayes in *Balneo Mariæ*, ſo the ſpirit of Wine doth attract unto it the whole Eſſence of the Rhubarb; then put the remaining Rhubarb again with more Oyl, to digeſt until it be tinged; and again extract the Tincture with ſpirit of Wine, which repete ſo often till the Rhubarb yield no more tincture: Then diſtil off half the tinged ſpirit of Wine, which return again, and again diſtil off half, which work repeat four times, then at laſt diſtil off the whole. Then is the Tincture brought over, *per Alembicum*, with the ſpirit of Wine. Afterwards you muſt ſeparate it, and bring it to be like hony, or the form of a Balſum, in *Balneo Vaporoſo*.

Its Doſe is 10 or 12 drops in ſome Conſerve or convenient Liquor.

The Tincture of Sugar.

Take white Sugar pulveriſed, one pound, put it in a glaſs-body with two ſpoonfuls of diſtilled Vinegar, digeſt it upon hot aſhes for 6 hours; then pour thereon rectified *Aqua Vitæ*, that it be two fingers above it, digeſt it until it be tinged; then decant of the tinged Spirit, and pour on more, until it will extract no more tincture; then diſtil off the *Menſtruum* in *Balneo Mariæ*, and the Tincture or Eſſence will remain red in the bottom, which ought to be circulated with Cordial Waters.

The Tincture of Salt of Tartar.

Take the pureſt Salt of Tartar, that hath been prepared by often Calcinations, Solutions, Coagulations, and Fuſions, as much as you pleaſe, put it in a ſtrong Crucible, and melt it ſo long upon coals, until it change from a greeniſh colour to a blew, and be ſo ſharp, that a little quantity thereof laid on the tongue, burneth it like fire. Then put it into a Glaſs-body, and pour thereon, by little and little, ſo much Spirit of Wine, till it be three fingers high above the matter, ſet in the cold for an hour, then ſet it in a ſand furnace, and let it gently boyl, until the ſpirit be well Tinged, which ſeparate, and put on more, until all the Tincture be extracted: Afterwards diſtil off the ſpirit of Wine, and ſo will the tincture remain in the bottom red as bloud, and of a moſt pleaſant ſavour.

Its uſe.

The doſe is from 5, 6, to 8 drops in White-wine, or opening broth, to provoke Urine, and expel the reliques of the French pox, and other inveterate diſeaſes. Its very good alſo in any Hypocondriack diſtempers; it openeth all kind of Obſtructions, and they that uſe it, it alwayes keeps their belly laxative and open.

The

The Chymical Oyl of the Hearb or Flower of any Vegetable, is made thus.

Take of the hearb or flower dryed, one pound, of Spring water twenty four pints, diſtil them in a great Alembick, with its cooler or copper Still with a worm paſſing through a veſſel of cold water. Let the Oyl that is drawn with the Water be ſeparated with a Tunnel or ſeparating Glaſs, and let the Water that is ſeparated be kept for a new diſtillation.

Note, that if this Water be uſed two or three times in the drawing of the Oil, it will be an excellent water of that Vegetable from which it is diſtilled, and as good as moſt that ſhall be drawn any other way.

After the ſame manner are made Oyls of the dry kinds of

Orenges,
Citrons,
Lemons.

But note, that theſe Rinds muſt be freſh, and (the inward whiteneſs being ſeparated) be bruiſed.

The Oyl commonly called the Spirit of Roſes.

Take of Damask, or red Roſes, being freſh, as many as you pleaſe, infuſe them in as much warm Water as is ſufficient for the ſpace of twenty four hours. Then ſtrain and preſs them, and repeat the infuſion ſeveral times with preſſing, until the liquor become fully impregnated, which then muſt be diſtilled in an Alembick with a refrigeratory or Copper Still with a worm, let the Spirit which ſwims on the Water be ſeparated, and the water kept for a new infuſion.

This kind of Spirit may be made by bruiſing the Roſes with Salt, or laying a lane of Roſes and another of Salt, and ſo keeping them half a year or more, which then muſt be diſtilled in as much Common-water, or Roſe-water as is ſufficient.

Oyls are made out of ſeeds thus.

Take of what ſeeds you pleaſe, bruiſed, two pound; of ſpring-water, twenty pints; let them be macerated for the ſpace of 24 hours, and then be diſtilled in a Copper Still with a worm, or Alembick with its refrigerating. The oyl extracted with the water, being ſeparated with a tunnel, keep the water for a new Diſtillation.

This water after three or four diſtillations, is a very excellent water, and better then is drawn any way out of that Vegetable whereof theſe are ſeeds; I mean for vertue, though not alwayes for ſmell.

After the ſame manner are made Oyls out of Spices, and aromatical woods.

Oyls are made out of Berries thus.

Take of what Berries you pleaſe, being freſh, 25 pound, bruiſe them, and put them into a wooden veſſel with 12 pints of ſpring-water, and a pound of the ſtrongeſt leaven; let them be put in a celler (the veſſel being cloſe ſtopped) for the ſpace of three months, then let them be diſtilled in an Alembick, or Copper Still with their refrigeratory, with as much ſpring water as is ſufficient. After the ſeparation of the Oyl, let the water be kept for a new Diſtillation. Note, that the water being uſed in two or three Diſtillations, is a very excellent water, and full of the vertue of the Berries.

Oyl is made out of any ſolid Wood thus.

Take of what Wood you pleaſe, made into groſs powder, as much as you will, let it be put into a Retort, and diſtilled in ſand. The Oyl which firſt diſtils, as being the thinner, and ſweeter, muſt be kept a part; which with rectifying with much water yet may be made more pleaſant; the acid water or Spirit, which in diſtilling comes forth, being ſeparated; which alſo (being rectified from the flegm with the heat of a *Balneum*) may be kept for uſe, being full of the vertue of the wood. After

After the ſame manner are made the Oyl and Spirit of Tartar; but thus much note, that both are more pure and pleaſant, being made out of the Cryſtals, than out of the crude Tartar.

To make a moſt excellent Oyl out of any Wood, or Gums, in a ſhort time, without much coſt.

Take of what wood you pleaſe, or Gum, bruiſed ſmall, put it into a veſſel fit for it, then pour on ſo much of ſpirit of Salt as will cover your matter, then ſet it in Sand with an Alembick, make the ſpirit boyl, ſo all the Oyl flyeth over with a little phlegm; for, the ſpirit of Salt, by its ſharpneſs, freeth the Oyl, ſo that it flyeth over very eaſily.

The ſpirit of Salt being rectified may ſerve again.

To make Vegetables yield their Oyl eaſily.

Diſtil them, being firſt bruiſed, in ſalt water, for Salt freeth the Oyl from its body; Let them firſt be macerated three or four dayes in the ſaid water.

The ſpirit of Turpentine is made thus.

Take of cleer Turpentine, as much as you pleaſe, put it in a Copper-Still with its Refrigeratory, near full; ſo ſhall you diſtill a ſpirit which will ſwim on the water, which you may rectifie in *Balneo Mariæ*, and by often diſtillations, exalt it to the height of ſpirit of Wine.

Another more excellent way.

Take of ſimple Venice Turpentine, as much as you pleaſe, diſtill it *per ſe*, in a gentle *Balneo Vaporoſo*, having very well enclоſed all the Joynts, and that ſpirit will diſtil ſo very ſubtil, that it will vapour away in ones hand: Out of one pound of Turpentine you will ſcarce have half an ounce. The other part thereof keep for other uſes.

This Spirit is an excellent Remedy in the Gonorrhea, and is a

notable Diuretick; it cleanſeth, it ripeneth Impoſthumes: it is Narcotick, and equalleth the vertues of the true Balſam.

Oyl or Spirit of Turpentine is made thus.

Take of Venice Turpentine, as much as you pleaſe, of Spring-water four times as much, let them be put into an Alembick, or copper-Still with its refrigeratory, then put fire under it: ſo there will diſtil a thin white Oyl like water, and in the bottom of the veſſel will remain a hard gum called Colophonia, which is called boyled Turpentine: That white Oyl may be better and freer from the ſmell of the fire if it be drawn in *Balneo*, with a gourd, and glaſs head.

Common Oyl Olive may be diſtilled after this manner, and be made very pleaſant, and ſweet, alſo moſt unctuous things, as *Sperma Ceti*, Storax liquid, and alſo many Gums.

Another way to make the Oyl of Turpentine.

Take the matter that is left in the Diſtillation of the Spirit of Turpentine (ſo that the ſpirit be not drawn with too ſtrong a fire): And diſtil it *per ſe*, in a glaſs Retort, in Aſhes or Sand; ſo ſhall you have firſt a yellow Oyl, called, *The true Oyl of Turpentine*; then a thick and red Oyl, called, *The Balſam of Turpentine*; Then there remains in the bottom of the Retort, the *Colophonia*, improperly ſo called, the former matter being properly *Colophonia*, this being ſo very black and dry. If you digeſt the Oyl in *Balneo Mariæ*, it will take away its evil Savour.

Its virtues.

It healeth, it diſſolveth, it openeth, cleanſeth, and comforteth, and may be outwardly uſed in ſtead of a true Balſam; it may alſo be uſed in all wounds incurable and ſtincking Ulcers, Boyls, Fractures, Contractures, refrigerated members, Chilblains, *&c.* But it is not alwayes to be uſed *per ſe*, or alone; but there is further required, that it be conveniently mixed with other things fit for the cure intended.

Oyl of Gums, Reſines, fat and oyly things may be drawn thus.

Take of either of theſe which you pleaſe, being melted, a pound; mix it with three pound of the powder of tiles, or unſlaked lime; put them into a Retort, and extract an Oyl, which with plenty of water may be rectified.

Note, that the water from whence the Oyl is ſeparated, is of excellent vertue, according to the nature of the matter from whence it is drawn.

Oyl of Champhire is made thus.

Take of Camphire ſliced thin, as much as you pleaſe, put it into a double quantity of *Aqua fortis*, or ſpirit of Wine, let the glaſs, having a narrow neck, be ſet by the fire, or on ſand or aſhes, the ſpace of five or ſix hours, ſhaking the glaſs every half hour, and the Camphire will all be diſſolved, and ſwim on the *Aqua fortis*, or ſpirit of Wine, like an Oyl.

Note, that if you ſeparate it, it will all be hard again preſently, but not otherwiſe.

Another way to make Oyl of Camphire, that it ſhall not be reduced again.

Take of Camphire powdered, as much as you pleaſe, put it into a glaſſe like a Urinal, put upon it another urinal-glaſs inverted, the joynts being cloſe ſhutten; ſublime it in aſhes, inverting thoſe urinals ſo often till the Camphire be turned into an Oyl, then circulate it for the ſpace of a month, and it will be ſo ſubtle, that it will all preſently vapour away in the air, if the glaſs be open.

Another way to make Oyl of Camphire.

Take two ounces of *Camphire*, diſſolve it in four ounces of pure Oyl Olive, then put them into four pints of fair water,

distil them all together in a glass gourd, either in ashes or *Balneo*, and there will distil both Water, and Oyl, which separate and keep by it self.

All these kinds of Oyl of Camphire are very good against putrefaction, fits of the Mother, passions of the heart, *&c.* A few drops thereof may be taken in any liquor, or the breast be anointed therewith: Also the fume thereof may be taken in at the mouth.

A true Oyl of Sugar.

Take of the best white Sugar-candy, imbibe it with the best spirit of Wine ten times, after every time drying it again, then hang it in a white silken bag in a moist cellar, over a glass vessel, that it may dissolve, and drop into it. Evaporate the water in *Balneo*, and in the bottom will the Oyl remain.

This is very excellent in all distempers of the Lungs.

Oyl of Sage.

Take a great quantity of Sage, set it in the shade for two or three weeks, in a large Glass-vessel, close shut; then distil it in a Copper-Stil, with its Refrigeratory; and there have you the water, which you may rectifie: and also the yellow Oyl. It is good in all diseases of the Nerves, the Palse, Apoplexie, Convulsions, and such like.

Oyl of Amber is made thus.

Take of white Amber, one part, of the powder of flints calcined, or the powder of tiles, two parts; mingle them, and put them into a Retort, and distil them in Sand; The Oyl which is white and clear, which first distilled off, keep by it self, continuing the distillation as long as any Oyl distils off.

The salt of Amber, which adheres to the neck of the Retort within side, being gathered, let be purified by solution, filtration, and coagulation, according to art, and be kept for use.

After

After the distillation is ended, and all be cold, let there be a rectification and separation of the clear Oyl from the fœtid Oyl, after this manner; Put the distilled Liquors into a glass-body, and distil it in *Balneo Mariæ*, with a fire strong enough, and first the Plegm, or spiritual part, will distil over, and also the Golden Oyl swimming on that Liquor, which is then to be separated with a separating-glass, and kept for its use. But the stinking blackish Oyl remains in the body, take that and keep it by it self, as a Balsom of Amber.

Its vertues.

The yellow Oyl of Amber was once esteemed Sacred for its excellent Vertues, which either by it self, or compounded with other things, it is effectual in the Epilepsie, Apoplexie, Melancholy, Cramp, Vertigo, Pestilence, Stone, Cold defluxions in the head, Palpitation of the heart, for such that are troubled in Mind, in the Jaundies, difficulty of Breathing, difficulty of Urine, hard Travel, Strangulation of the Womb, retention of the Menstruums, the white Flux in Women, Worms and Fevers. The Dose is from two grains to four grains. But the Balsom of Amber is seldom used inwardly, unless it be one or two grains in the Suffocation of the Matrix: But externally its used to smell to, against the Suffocation of the Matrix; or else for Emplasters in closing of wounds, and stanching of bloud: for the same purposes serves the yellow Oyl.

After the same manner may be made Oyls out of any Gums which may be powdered.

Oyl of Myrrhe is made thus.

Take of Myrrhe bruised, or Bay-salt, of each six pound, let them be dissolved in sixty pints of spring-water, and be distilled in an Alembick, or Copper-Still, according to Art.

Oyl of Myrrhe per deliquium, *or by diſſolution, is made thus.*

Take Hen-egs, boyled hard, and cut in the middle lengthwayes; take out the yelks, then fill up the hollow half way with powder of Myrrhe, and joyn the parts together again, binding them with a thread, and ſo ſet them upon a grate betwixt two platters, in a cold moiſt place, ſo the liquor of the Myrrhe diſſolved will diſtil into the lower platter.

Oyl of Tartar per deliquium (i.) *by diſſolution.*

Take of the beſt Tartar, calcined white, according to Art; put it into a cotten bag, hang it in the cellar or ſome moiſt place, putting under a Receiver.

Oyles by expreſſion are made thus.

Take of what things you pleaſe, ſuch as will afford an Oyl by expreſſion, bruiſe them, then put them into a bag, and preſs them ſtrongly, putting a veſſel under to receive the Oyl.

Note, that they muſt ſtand in the preſs ſome hours, becauſe the Oyl drops by little and little.

Note alſo, that if you warm them before you put them into the preſs, they will yield more Oyl, but then it will not keep good ſo long as otherwiſe.

After this manner are made Oyls of

Nutmegs,
Mace,
Almonds,
Linſeed, and ſuch like.

A vomiting, and purging Oyl made by expreſſion.

Take of the Berries of Ebulus or Dwarfe Elder, as many as you pleaſe, let them be dryed but not over much, then bruiſe them, and in bruiſing them, moiſten them with the beſt Spirit of Wine, until they begin to be Oyly; then warm them by

by the fire, and preſs forth the Oyl, and ſet it in the Sun to be purified.

Ten drops of this Oyl taken inwardly worketh upward and downward, and is very good againſt the Dropſie, and all wateriſh diſeaſes.

The belly being therewith anointed, is made thereby ſoluble.

Any part that is much pained with the Gout, or any ſuch grief, is preſently eaſed by being anointed with this Oyl.

Oyl of Jaſmine is made thus.

Take of flowers of Jaſmine, as many as you pleaſe, put them into as much ſweet mature Oyl, as you pleaſe; put them into a glaſs cloſe ſtopt, and ſet them into the Sun to be infuſed for the ſpace of twenty dayes, then take them out, and ſtrain the Oyl from the flowers: and if thou wouldeſt have the Oyl yet ſtronger, put in new flowers, and do as before.

This is a pleaſant perfume, and being mixt with Oyls and Ointments, gives them a grateful ſmell. It is alſo uſed in the perfuming of Leather.

After this manner may be made Oyl of any flowers: but becauſe I ſhall keep my ſelf to the Art of Diſtillation only, I ſhall not ſo far digreſs as to ſpeak of theſe kinds of Oyls; only I thought good to ſet down the Oil of Jaſmine becauſe by reaſon of its fragrancy it hath ſome analogy with Chymical Oyls that are made by Diſtillation.

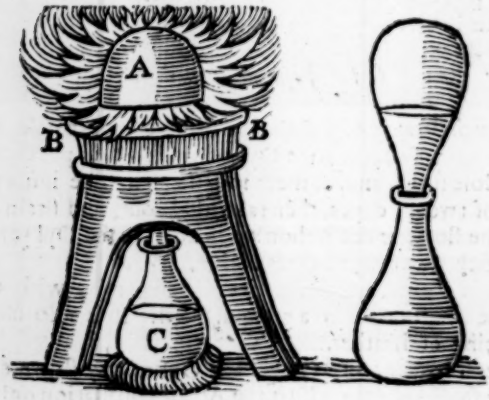
To make any Oyl, or Water, per deſcenſum.

Take an earthen gourd, fill it full with wood or hearbs, or what you pleaſe, being cut ſmall, then invert it (*i. e.*) turn it upſide down, and ſet it in the furnace, lute it well thereunto, then ſet another gourd of earth under it, with a wider mouth, that the uppermoſt may go into it, before you put the one into the other, you muſt have a little veſſel or inſtrument of Tin with brims round about on the top, by which it muſt hang into the lower gourd, the body thereof being 2 or 3 inches deep, and full of holes, that the Oil or Water may drop through, and

not

not the Vegetable it ſelf. Into this Inſtrument, being firſt ſet into the lower gourd, put the mouth of the upper gourd; then make thy fire on the top, and keep it burning as long as any liquor will drop.

The figure of this Furnace is thus.



A, *Signifies the Gourd containing the matter to be diſtilled.*
B, *The Furnace containing the Coals, ſo that they ſurround the upper Gourd.*
C, *The lower Gourd or Recipient ſet upon ſtraw-rings.*
D, *The veſſel of Tin with holes, and brims which muſt be ſet in the Recipient.*

How to make an Oyl and Water out of Soot.

This may be diſtilled *per deſcenſum*, or by Retort, as thus, *viz.* Take of the beſt Soot (which ſhines like jeat;) fill with it a Glaſs Retort coated, or earthen Retort to the Neck, diſtil it with a ſtrong fire, by degres into a large Receiver, and there will come forth a yellowiſh Spirit with a black Oyl, which thou maiſt ſeparate and digeſt.

How to rectifie Spirits.

You must set them in the sun in glasses well stopped, and half filled, being set in sand to the third part of their height, that the water waxing hot by the heat of the sun, may separate it self from the flegm mixed therewith, wch will be performed in twelve or fifteen dayes. There is another better way to do this, which is, to distil them again in *Balneo* with a gentle fire; or, if you will, put them into a Retort furnished with its Receiver, and set them upon crystal or iron bowls, or in an iron morter, directly opposite to the beams of the sun, as you may learn by these ensuing signs.

A Retort with its receiver standing upon Crystal bowls, just opposite to the Sun-beams.

A, *Shews the Retort.*
B, *The Receiver.*
C, *The Crystal Bowls.*

Another Retort with its receiver standing in a Marble or Iron Mortar, directly opposite to the Sun.

A, *Shews the Retort.*
B, *The Marble or Iron Mortar.*
C, *The Receiver.*

How to rectifie all ſtinking, thick black Oils that are made by Retort, and to take away their ſtink.

Take Oyl of Amber, or any ſuch ſtinking Oyl, put it into a glaſs Retort, the fourth part only being full, pour on it drop by drop the ſpirit of Salt, (or any other acid Spirit) and they will boyl together; and when ſo much of the ſpirit is poured on, that it boyleth no more, then ceaſe and diſtil it. Firſt cometh over a ſtinking water, then a clear white, well ſmelling Oyl, and after that a yellow Oyl, which is indifferent good: but the ſpirit of Salt hath loſt its ſharpneſs: the volatile Salt of the Oyl remaineth coagulated with the ſpirit of Salt, and is black, and taſteth like ſalt Armoniack, and hath no ſmell being ſublimed from it. Now the reaſon of all this is, becauſe the volatile Salt of the Oyl, which is the cauſe of the ſtink thereof, is fixed by the acid ſpirit of the Salt: for acid Spirits, and volatile Salts, are contrary the one to the other, and ſpirit of Urine, or any volatile ſalt, will precipitate any metal as well as ſalt of Tartar.

Theſe Oyls will remain clear, and have far more vertue, than the ordinary ſort of Oyls have.

As for common ordinary diſtilled Oyls, they need not, if they be well ſeparated from the Water with which they were diſtilled, any Rectifying at all; and if you go about to rectifie them, you will loſe a good part of them, and make that which remains not at all the better. But if there be any better than another for rectifying of them, it is by digeſtion, by which means there will be a ſeparation of what is flegmatick, which you may ſeparate afterwards, and by this means you ſhall loſe none of the Oyls.

Of

Of compound Waters, Oyls, and Spirits.

BOOK II.

A diſſolving Menſtruum.

TAke Cyprus Turpentine, and the beſt ſpirit of Wine, of each two pound; diſtil them in a Glaſs-gourd either in *Balneo* or Aſhes. Separate the Oyl from the Spirit with a tunnel or ſeparating glaſs, diſtil the Spirit again, and ſo often until it ſavour no more of the Oyl of Turpentine, and then it is ſufficiently prepared.

This Menſtruum diſſolves any hard ſtones preſently, and extracts the tincture of Coral.

A Glaſs-Gourd with its Head.

Another diſſolving Menſtruum, or acetum Philoſophicum.

Take Hony, Salt melted, of each a pound, of the ſtrongeſt Spirit of Vinegar, two pound; digeſt them for the ſpace of a fortnight, or more; then diſtil them in Aſhes, cohobate the Liquor upon the feces three or four times, then rectifie the Spirit.

Note, that they muſt be done in a large Glaſs-gourd.

This is of the ſame vertue as the former, if not more powerfull.

Another diſſolving Menſtruum.

Take of the beſt rectified ſpirit of Wine, with which imbibe the ſtrongeſt unſlaked Lime, until they be made into a paſt; then put them into a Glaſs-gourd, and diſtil off the ſpirit in Aſhes: This Spirit, pour on more freſh Lime, and do as before; do this three or four times, and thou ſhalt have a very ſubtile Spirit able to diſſolve moſt things, and to extract the vertue out of them.

Paracelſus his *Elixir Subtilitatis.*

Take Oyl Olive, Honey, rectified ſpirit of Wine, of each a pint, diſtil them all together in aſhes, then ſeparate all the flegm from the Oyls, which will be diſtinguiſhed by many colours, put all theſe colours into a Pellican, and add to them the third part of the Eſſence of Balm, and Sallendine digeſt them for the ſpace of a month: Then keep it for uſe.

This Liquor is ſo ſubtile that it penetrateth every thing.

Uſque-Bath, or Iriſh Aqua vitæ, is made thus.

Take a Gallon of ſmall *Aqua vitæ*, put it into a Glaſs-veſſel; put thereto a quart of Canary Sack, two pound of Raiſins of the Sun ſtoned, but not waſhed, two ounces of Dates ſtoned, and the white skins thereof pulled out, two ounces of Cinnamon groſſely bruiſed, four good Nutmegs bruiſed, an ounce of the beſt Engliſh Licoriſh ſliced, and bruiſed; ſtop the veſſels very cloſe,

close, and let them infuse in a cold place six or eight dayes, then let the Liquor run through a bag called *Manica Hippocratis* made of white Cotten.

This Liquor is commonly used in surfeits, being a good Stomach water.

Aqua Cœlestis, is made thus.

Take of Cinnamon
Cloves
Nutmegs
Ginger
Zedoary
Galingal
Long-Pepper
Citron pill
Spicknard
Lignum-aloes
Cububs
Cardamums
Calamus aromaticus
Germander
Ground-pine
Mace
White Frankincense
Tormentil
Hermodactyls
the pith of Dwarf-elder
Juniper berries
Bay berries
the seeds and flowers of Motherwort
the seeds of Smallage
Fennel
Anise
the leaves of Sorrel
Sage
Fel-wort
Rosemary
Marjoram
Mints
Penny-royal
Stechados
the flowers of Elder
Roses red
white
of the leaves of Scabious
Rue
the lesser Moonwort
Egrimony
Centory
Fumitary
Pimpernel
Sow-thistle
Eye-bright
Mayden-hair
Endive
Red Saunders
Aloes, of each two ounces;
Pure Amber
the best Rhubarb, of each two Drams;
dryed Figs
Raisins of the Sun
Dates stoned
Sweet Almonds
Grains of the Pine, of each an ounce.

Of the beſt *Aqua vitæ*, to the quantity of them all, of the beſt hard Sugar a pound, of white Honey half a pound, then add

the root of Gentian	the root of Briony
flowers of Roſemary	Sowbread
Pepperwort,	Wormwood, of each half an ounce.

Now before theſe are diſtilled, quench gold, being made red hot, oftentimes in the foreſaid water; put therein oriental Pearls beaten ſmall, an ounce; and then diſtil it, after twenty four hours infuſion.

This is a very Cordial water, good againſt faintings and infection.

Aqua Imperialis, is made thus.

Take of the rind of Citrons dryed
Oranges,
Nutmeg
Cloves
Cinnamon, of each two ounces;
the roots of Flower-de-luce
Cyprus
Calamus aromaticus
Zedoary
Galingal
Ginger, of each half a pound.
Of the tops of Lavender
Roſemary, of each two handful;
the leaves of the Bay-tree
Marjoram
Balm
Mints
Sage
Thyme
flower of Roſes white
Damask, of each half an handful;
Roſe-water four pints
the beſt White-wine a gallon.

Bruiſe

Bruiſe what muſt be bruiſed, then infuſe them all twenty four hours, after which diſtil them.

This is of the ſame vertue as the former.

Aqua Mirabilis, is made thus.

Take of	Cloves	Nutmegs	
	Galingal	Ginger,	of each a Dram;
	Cububs	the juice of Salendine,	half a pint,
	Mace	Spirit of Wine	a pint,
	Cardamoms	White-Wine	three pints.

Infuſe all theſe twenty four hours, and then diſtil off two pints by an Alembick.

This water is very good againſt wind in the Stomach and Head.

Dr. Stephens *Water is made thus.*

Take a gallon of	Gaſcoin wine	Sage	
	Ginger	Red Mints	
	Galingale	Red Roſes	
	Cinnamon	Thyme	
	Nutmegs	Pellitory	
	Grains	Roſemary	
	Anniſeeds	Wild Thyme	
	Fennel ſeeds	Camomil	
	Carroway ſeeds of each a dram.	Lavender,	of each a handfull.

Beat the Spices ſmall, and bruiſe the Hearbs, letting them macerate twelve hours, ſtirring them now and then, diſtil them by an Alembick or Copper-Still with its refrigeratory, keep the firſt pint by it ſelf, and the ſecond by it ſelf.

Note, that the firſt pint will be the hotter, but the ſecond the ſtronger of the ingrédients.

This Water is well known to comfort all the Principal parts.

A famous

A famous Surfet Water.

Take of red Poppy-cakes (after the Water hath been diſtilled from them in a cold Still) not over dryed, two pound; pour upon them of the Water of red Poppy, a gallon and half; Canary-Wine three pints; add to them of Coriander-ſeeds bruiſed, four ounces, of Dill ſeed bruiſed two ounces, of Cloves bruiſed half an ounce, of Nutmegs ſliced an ounce, of Roſemary a handful, three Orenges cut in the middle, diſtil them in a hot Still; to the Water put the juice of ſix Orenges, and hang in it half an ounce of Nutmegs ſliced, and as much Cinamon bruiſed, two drams of Cloves, a handful of Roſemary cut ſmall, ſweet Fennel-ſeeds bruiſed an ounce, of Raiſins in the Sun ſtoned half a pound, being all put into a bag, which may be hanged in the Water (the veſſell being cloſe ſtopt) the ſpace of a month, and then be taken out, and caſt away, the Liquor thereof being firſt preſſed out into the foreſaid Water.

This Water is of wonderful vertue in Surfets, and Pluriſies, compoſeth the Spirits, cauſeth reſt, helpeth digeſtion if two or three or four ounces thereof be drunk, and the patient compoſe himſelf to reſt.

A Pectoral Water.

Diſtil green Hyſop in a cold Still till you have a gallon and half of the Water, to this put four handful of dryed Hyſop, a handful of Rue, as much of Roſemary, and Horehound, Elecampany-root bruiſed, and of Horſe-radiſh-root, bruiſed, of each four ounces, of Tobacco in the leaf three ounces, Annis-ſeed bruiſed two ounces, two quarts of Canary-wine, let them all ſtand in digeſtion two dayes, then diſtil them, and in the Water that is diſtilled put half a pound of Raiſins of the ſun ſtoned, of Licoriſh two ounces, ſweet Fennel-ſeeds bruiſed two ounces and a half, Ginger ſliced an ounce and a half, and let them be infuſed in *Frigido* the ſpace of ten dayes, then take them out.

This Water ſweetned with Sugar-candy and drunk to the quantity of three or four ounces twice in a day, is very good for

for thoſe that are ptiſical, it ſtrengthneth the Lungs, attenuates thick flegm, opens obſtructions, and is very good to comfort the ſtomack.

A very excellent Water againſt the Worms.

Take of Worm-ſeed bruiſed eight ounces, the ſhavings of Harts-horn two ounces, of Peach-flowers dryed an ounce, of Aloes bruiſed half an ounce, pour on theſe the water of Tanſie, Rue, Peach-flowers, and of Worm-wood of each a pint and half; let them, being put into a glaſs veſſel, be digeſted the ſpace of three dayes, then diſtill them; cohobate this Water three times.

This Water is very excellent againſt the Worms; it may be given from half an ounce to three ounces, according to the age of the patient.

A Water againſt the Convulſions.

Take of *Res Vitrioli* (which is that water that is diſtilled from Vitriol in the calcining thereof) two quarts, in this put of Rue a handful, of Juniper-berries bruiſed an ounce, of Bay-berries bruiſed half an ounce, Piony-berries bruiſed ſix drams, Camphire two drams, Rhubarb ſliced an ounce; digeſt theſe four dayes in a temperate *Balneo*, then diſtil them in a glaſs veſſel in aſhes, and there will come over a water of no ſmall vertue.

It cures Convulſions, in children eſpecially; it helps alſo the Vertigo, the Hyſterical paſſion, and Epilepſie; it is very excellent againſt all offenſive vapours, and wind that annoyes the head and ſtomach.

It may be taken from two drams to two ounces.

An Hydropical water.

Take of Worm wood, Broom-bloſſoms, of each a like quantity, bruiſe them, and mix with them ſome leaven, and let them ſtand in fermentation in a cold place, the ſpace of a

week; then diſtil them in a Cold-Still, till they be very dry: Take a gallon of this water, and half a gallon of the Spirit of Urine, pour them upon two pound of dryed Broom-bloſſoms, half a pound of Horſe-radiſh-roots dryed, three ounces of the beſt Rhubarb ſliced, two ounces of ſweet Fennel-ſeed bruiſed, and an ounce and half of Nutmegs: let them digeſt a week, being put into a glaſs veſſel, in a temperate *Balneo*; then preſs the liquor hard from the feces, put this liquor in the ſaid veſſel again, and to it put three ounces of ſweet Fennel-ſeeds bruiſed, Licoriſh ſliced two ounces, digeſt them in a gentle heat the ſpace of a week, then pour it off from the feces, and keep it cloſe ſtopt.

This water being drank from the quantity of an ounce to four ounces every morning, and at four of the clock in the afternoon, doth ſeldom fail in curing the Dropſie; it ſtrengtheneth alſo the Liver, is very good againſt gravel in the back, ſtone, cures the Scurvy, Gour, and ſuch diſeaſes as proceed from the weakneſs, and obſtructions of the Liver.

A water againſt the Colick.

Take of Aniſeed three ounces
Cummin-ſeed three drams
Cinnamon half an ounce
Mace
Cloves
Nutmeg, of each a dram,
Galangal three drams,
Calamus Aromaticus, dryed, half an ounce,
The dryed rind of Oranges, two ounces,
Bayberries, half an ounce.

Let all theſe, being bruiſed, be macerated in ſix pints of Mallago-wine 48 hours, then be diſtilled in *Balneo*, till all be dry.

This Water being drank to the quantity of an ounce or two at a time, doth eaſe the gripings of the belly, and ſtomack, very much.

A Water againſt the Vertigo, and Convulſions.

Take of Black-cherries bruiſed with their kernels, a gallon, of the flowers of Lavander three handful, half an ounce of white Muſtard-ſeed bruiſed, mix theſe together; then put ſome ferment to them, and let them ſtand cloſe covered, the ſpace of a week, then diſtil them in *Balneo* till all be dry.

This Water being drank to the quantity of an ounce or two or three, doth much relieve the weakneſs of the head, and helps the Vertigo thereof, as alſo ſtrengthens the ſinews, and expels windineſs out of the head and ſtomach.

A compound Water of Burre-root cauſing ſweat.

Take the root of the great Burre, freſh,
Swallow-wort, freſh,
the middle rind of the root of the Aſh-tree, of each two pound; cut them ſmall, and infuſe them 24 hours in the beſt White-wine, and Rue vinegar, of each five pints, then diſtil them in *Balneo* till all be dry, put to the Water as much of the Spirit of Sulphur *Per Campanam*, as will give it a pleaſant acidity, and to every pint of the water put a ſcruple and half of Camphire cut ſmall, and tyed up in a bag, which may continually hang in the water.

This was a famous water in *Germany* againſt the Plague, peſtilential and Epidemical diſeaſes; it cauſeth ſweat wonderfully, if two or three ounces thereof be drank, and the patient compoſe himſelf to ſweat.

Another excellent Sudorifick and Plague Water.

Take of the beſt Spirit of Wine a gallon,
Andromachus Treakle, ſix ounces,
Myrrhe, two ounces,
The roots of Colts-foot, three ounces,
Sperma Ceti
Terra ſigillata, of each half an ounce,

The root of Swallow-wort, an ounce,
Dittany
Pimpernel
Valerian-root, of each two drams
Camphire, a dram

Mix all theſe together in a glaſs veſſel, and let them ſtand cloſe ſtopt the ſpace of eight dayes in the Sun.

Let the Patient drink of this a ſpoonful or two, and compoſe himſelf to ſweat.

Dr. Burges *his Plague water.*

Take three pints of Muſcadine, and boyl in it Sage and Rue, of each a handful, till a pint be waſted; then ſtrain it, and ſet it over the fire again, put thereto a dram of long-Pepper, Ginger, and Nutmeg, of each half an ounce, being all bruiſed together: then boyl them a little, and put thereto half an ounce of Andromachus-treakle, and three drams of Mithridate, and a quarter of a pint of the beſt Angelica-water.

This Water (which, as ſaith the Author, muſt be kept as your life, and above all earthly treaſure) muſt be taken to the quantity of a ſpoonful or two morning and evening, if you be already infected, and ſweat thereupon: if you be not infected, a ſpoonful is ſufficient, half in the morning and half at night; All the Plague-time, under God (ſaith the Author) truſt to this, for there was never man, woman, or child, that failed of their expectation in taking of it: This is alſo of the ſame efficacy not only againſt the Plague, but Pox, Meaſles, Surfets, *&c.*

Crollius *his Treakle Water Camphorated.*

Take of Andromachus Treakle, five ounces,
The beſt Myrrhe, two ounces, and half,
The beſt Saffron, half an ounce,
Camphire, two drams:

Mix them together, then pour upon them ten ounces of the beſt ſpirit of Wine, and let them ſtand 24 hours in a warm place then diſtil them in *Balneo* with a gradual fire, cohobate the ſpirit three times.

This

This ſpirit cauſeth ſweat wonderfully, and reſiſts all manner of infection.

It may be taken from a dram to an ounce in ſome appropriate Liquor.

A diſtilled Treakle Vinegar.

Take of the roots of Biſtort
Gentian
Angelica
Tormentil
Pimpernel, of each ten drams,
Bay-berries
Juniper-berries, of each an ounce,
Nutmeg, five drams,
The ſhavings of Saſſafras, two ounces,
Zedoary, half a dram,
White Sanders, three drams,
The leaves of Rue
Wormwood
Scordium, of each half a handful,
The flowers of Wall-flower
Bugloſs, of each a handful and half,
Andromachus Treakle
Mithridate, of each ſix drams.

Infuſe them all in three pints of the beſt White-wine vinegar, the ſpace of eight dayes in *Frigido* in glaſs veſſels; then diſtil them in *Balneo*.

This Spirit is very good to prevent them that are free, from infection, and thoſe that are already infected, from the danger thereof, if two or three ſpoonful thereof be taken once in a day with ſweating after, for thoſe that are infected, but without ſweating for others.

An excellent Water againſt the Stone in the Kidneys.

Take of the middle rind of the root of Aſh bruiſed, 2 pound,
Juniper-berries bruiſed, three pound,
Venice turpentine that is very pure, two pound and half.

Put theſe into twelve pints of Spring-water in a glaſs veſſell well cloſed, and there let them putrifie in horſe-dung for the ſpace of three moneths, then diſtill them in aſhes, and there will come forth an Oyl and a Water; ſeparate the one from the other.

Ten or twelve drops of this Oyl being taken every morning in four or ſix ſpoonfuls of the ſaid water, diſſolves the gravel and ſtone in the kidneys, moſt wonderfully.

Another Water for the ſame uſe.

Take the juyce of Raddiſh, Lemmons, of each a pound and half: Waters of Betony, Tanſey, Saxifrage, and Vervin, of each a pint; Hydromel, and Malmeſey, of each two pound: In theſe Liquors mixed together, infuſe for the ſpace of four or five dayes in a gentle *Balneo*, Juniper-berries, ripe and newly gathered, being bruiſed, three ounces, the ſeed of Gromel, Bur-dock, Radiſh, Saxifrage, Nettles, Onyons, Anniſe and Fennel, of each an ounce and half, the four cold ſeeds, the ſeed of great Mallows, of each three drams; the Calx of Eggs-ſhels, Cinnamon, of each three drams, of Camphire two drams; let all be well ſtrained and diſtilled in aſhes.

Two ounces of this Water taken every morning doth wonderfully cleanſe the Kidnies, provoke Urine, and expel the ſtone, eſpecially if you calcine the feces and extract the ſalt thereof with the ſaid water.

To make an excellent Wound-water.

Take Plantain, Rib-wort, Bone-wort, wild Angelica, Red-mints, Betony, Egrimony, Sanicle, Blew-bottles, White-bottles, Scabius,

Scabinus, Dentelyon, Avens, Honey-ſuckle-leaves, Bramble-buds, Hawthorn-buds, and leaves; Mugwort, Daſie-roots, leaves, and flowers; Wormwood, Southernwood, of each one handful: Boyl all theſe in a pottle of White-wine, and as much Spring-water, till one half be waſted; and when it is thus boyled, ſtrain it from the hearbs, and put to it half a pound of Honey, and let it boyl a little after; then put it into bottles, and keep it for your uſe.

Note, that theſe hearbs muſt be gathered in *May* only, but you may keep them dry, and make your water at any time.

This Water is very famous in many Counties, and it hath done ſuch cures in curing outward and inward Wounds, Impoſtumes, and Ulcers, that you would ſcarce believe it, if I ſhould recite them to you: alſo it is very good to heal a ſore mouth.

The Patient muſt take three or four ſpoonfuls thereof morning and evening, and in a ſhort time he ſhall find eaſe, and indeed a cure, unleſs he be ſo far declined as nothing almoſt can recover him.

If the wound be outward it muſt be waſhed therewith, and linnen clothes wet in the ſame be applyed thereto.

Dr. Mathias *his Palſie water is made thus.*

Take of Lavender flowers, a gallon; pour upon them of the beſt Spirit of Wine, three gallons: the veſſel being cloſe ſtopped, let them be macerated together in the Sun for the ſpace of ſix dayes, then diſtil them in an Alembick with its refrigeratory, then

Take the flowers of Sage
Roſemary
Betony, of each a handful;
Borage
Bugloſs
Lilly of the vally
Cowſlips, of each two handfuls.

Let all the flowers be freſh, and ſeaſonably gathered, and macerated

cerated in a gallon of the beſt Spirits of Wine, and mixed with the aforeſaid ſpirit of Lavender, adding then

the leaves of Balm
Motherwort
Orange tree, newly gathered
the flowers of Stechados
Oranges.
Bay-berries, of each an ounce.

After a convenient digeſtion, let them be diſtilled again, then add the outward rinds of Citrons,

the ſeed of Piony husked, of each ſix drams
Cinnamon
Nutmegs
Mace
Cardamums
Cububs
Of Yellow-Sanders, of each half an ounce,
Lignum Aloes, one dram,
the beſt Jujubs, the kernels taken out, half a pound.

Let them be digeſted for the ſpace of ſix weeks, then ſtrain and filter the Liquor, to which add of prepared Pearl two drams.

Prepared Emrald, a ſcruple,
Amber Gryſe
Musk
Saffron
Red Roſes
Sanders, of each an ounce,
Yellow Sanders
Rinds Citrons dryed, of each a dram.

Let all theſe ſpecies be tyed in a ſilken bag, and hanged in the aforeſaid Spirit.

A Scorbutical-water, or a Compound-water of Horſe-Radiſh, is made thus.

Take the leaves of both ſorts of Scurvy-graſs, being made very clean, of each ſix pound: let theſe be bruiſed, and the juyce preſſed forth, to which add the

Juyce

Juice of Brook-lime,
Water-creſſes, of each half a pound,
of the beſt White Wine eight pints,
twelve whole Lemmons cut,
of the freſh roots of Briony four pounds,
Horſe-radiſh a pound,
of the bark of Winteran half a pound,
of Nutmegs four ounces.

Let them be macerated three days, and diſtilled.

Three or four ſpoonfuls of this water taken twice in a day, cures the Scurvy preſently.

Spirit of Caſtor is made thus.

Take of freſh Caſtoreum two ounces,
flowers of Lavender freſh half an ounce,
Sage,
Roſemary, of each two drams,
Cinnamon three drams,
Mace,
Cloves, of each a dram,
the beſt rectified Spirit of Wine three pints.

Let them be digeſted in a Glaſs, (two parts of three being empty) ſtopt cloſe with a Bladder, and Cork, two days in warm aſhes; then diſtil the Spirit in *Balneo*, and keep it in a glaſs cloſe ſtopt. If you would make it ſtronger, take a pint of this Spirit, and an ounce of the powder of *Caſtoreum*, put them into a glaſs, and digeſt them in a cold place for the ſpace of ten days, and then ſtrain out the Spirit.

This Spirit is very good againſt fits of the Mother, paſſions of the heart which ariſe from vapours, &c.

Bezoar Water is made thus.

Take of the leaves of the greater Sallandine, together with the roots thereof, three handfuls and a half.
Of Rue two handfuls,
Scordium four handful,

Dittany of Crete,
Carduus, of each a handful and a half.
The Roots of Zedoary,
Angelica, of each three drams.
The outward rind of Citrons,
Lemmons, of each six drams.
The flower of Wall-gilly-flower, an ounce and half,
Red-roses,
The lesser Centory, of each two drams.
Cinnamon,
Cloves, of each three drams.
Andromachus his Treacle three ounces,
Mithridate an ounce and half,
Camphire two scruples,
Trochisces of Vipers two ounces,
Mace two drams,
Lignum-Aloes half an ounce,
Yellow Sanders a dram and half,
The seeds of Carduus an ounce,
Citrons six drams.

Cut those things that are to be cut, and let them be macerated three days in the best Spirit of Wine, and Muscadine, of each three pints and half, Vinegar of Wall-gilly-flowers, and the juice of Lemmons, of each a pint; let them be distilled in a glazed vessel in *Balneo*.

After half the liquor is distilled off, let that which remains in the vessel be streined through a linnen cloth, and vapoured away to the thickness of Honey, which may be called

A *Bezoard extract*.

This Water is a great Cordial, and good against any Infection.

To make a Specifical Sudorifick.

Take of Ginger a pound, Long-pepper, and Black-pepper, of each half an ounce, of Cardamoms three drams, of Grains an ounce, powder them, and put them into a glass with half an ounce of the best Camphire, distilled Vinegar two pound, digest them a moneth; then separate the Vinegar by expression, which must

muſt putrefie a moneth, and then be circulated for the ſpace of a week; then filter it, and thou haſt as powerful a Sudorifick as ever was or can be made.

The doſe is from a dram to half an ounce, and to be drank in a draught of Poſſet-drink.

Treakle-water is made thus.

Take of the juyce of the green ſhales of Walnuts four pound, the juyce of Rue three pints.

Carduus,
Mary-gold,
Balm, of each 2. pints.
The root of Butter-burre freſh, a pound and half,
Burre,
Angelica.
Maſter-wort freſh, of each half a pound,
The leaves of Scordium 4. handful,
Old Andromachus Treakle,
Mithridate, of each 8. ounces.
The beſt Canarie, 12. pints,
The ſharpeſt Vinegar 6. pints.
The juyce of Lemmons 2. pints.

Digeſt them two days in Horſe-dung, the veſſel being cloſe ſtopped; then diſtil them in ſand.

Aqua Mariæ is made thus.

Take of Sugar candid one pound,
Canarie Wine 6. ounces,
Roſe-water 4. ounces.
Make of theſe a ſyrup, and boyl it well, to which adde
of *Aqua-Imperialis* 2. pints,
Amber-grieſe,
Muſk, of each 18. grains.
Saffron 15. grains,
Yellow-Sanders infuſed in *Aqua-Imperialis* 2. drams.

The Mother-water commonly called Hysterical-Water, is made thus.

Take of the juyce of the root of Briony 4. pound.
leaves of Rue,
Mugwort, of each 2. pound,
Savin dryed 3. handful;
Mother-wort,
Neppe,
Penny-royall, of each 2. handful;
Garden-Basil,
Cretensian-Dittany, of each a handful and half,
The Rind of yellow-Oranges, fresh, 4. ounces,
Myrrhe 2. ounces,
Castoreum an ounce,
The best Canarie Wine 12. pints.

Let them be digested four dayes in a fit vessel, then distill them in *Balneo*.

A vomitting Water is made thus.

Take of the best Tobacco in leaves, cut small, 4. ounces, Squils 2. ounces, Nutmegs sliced half an ounce, put these into 3. pints of Spring-water, a pinte of White-wine-vinegar, distil them in a hot Still or Alembick.

If thou wouldest have it stronger, thou maist put this water on fresh Ingredients and distil it again.

A little quantity of this water is a most safe, and effectual Vomit, and may be taken from the eldest to the youngest, if so be you proportion the quantity to the strength of the Patient.

You may dulcifie it with Sugar, or Syrup, if you please.

A Vomitting Water made by Platerus.

Take green Walnuts gathered about Midsummer, Radish-root, of each bruised 2. parts, of distilled Wine-vinegar 4. parts digest them 5. days, then distil them in *Balneo*.

This being taken to the quantity of 2. spoonfuls, or 3. causeth easie vomitting.

A di-

A distilled Water that purgeth without any pain or griping.

Take of Scammony an ounce, Hermodactyls 2. ounces, the seeds of Broom, of Jesser Spurge, of Dwarf-elder, of each half an ounce, the juyce of Dwarf-elder, of wild Asses, Cucumber, of black Hellebore, the fresh flower of Elder, of each an ounce and half, Polypodium 6. ounces, of Sene 3. ounces, Red-sugar 8. ounces, common distilled Water 6 pints.

Let all these be bruised, and infused in the water 24. hours, then be distilled in *Balneo*.

This Water may be given from 2 drams to 3. ounces, and it purgeth all manner of humors, opens all obstructions, and is pleasant to be taken, and they whose stomachs loath all other Physick, may take this without any offence.

After it is distilled there may be hanged a little bag of Spices in it, as also it may be sweetned with Sugar, or any opening Syrup.

A specifical Liquor against the Tooth-ach.

Take of Oil of Cloves well rectified half an ounce, in it dissolve half a dram of Camphire, add to them of the Spirit of Turpentine four times rectified, in which half a dram of Opium hath been infused, half an ounce.

A drop or two of this Liquor put into a hollow tooth with some Lint, easeth the Tooth-ach presently.

A Water of wonderful Efficacy, not undeservedly called the Mother of Balsom.

Take Turpentine,
Lignum-Aloes,
Olibanum, of each five ounces;
Cinnamon,
Lilly-leaves, of each half an ounce;
Pepper-wort,
Balsom, of each two ounces.

Mix them well together, and distil them according to Art

in a gentle fire, and there will come a clear water, good in all diſeaſes, wherein the Balſom is uſually applyed.

1. It takes away the Pimples in the face. 2. It takes away all blemiſhes in the eyes. 3. It comforteth a cold head, and helpeth the memorative faculty. 4. It retardeth gray-hairs. 5. It cleareth the Spirits. 6. It ſtrengtheneth the digeſtive faculty. 7. It healeth the Nerves. 8. It preventeth the Palſie. 9. It expelleth all wind out of the body, and giveth a good ſavour to the whole body.

When you ſee no more white and yellow water, to aſcend the Alembick, or Diſtil; then increaſe the fire a little, until it leave diſtilling. This water keep apart; for it is of infinite vertues, which I am not able to comprehend.

1. It purgeth the whole body, and preſerveth it from putrefaction, like the true natural Balſom. 2. After a man is dead, it admitteth not of any corruption. 3. It cureth Leproſie. 4. It is good in the Epilepſie. 5. It is good in an old deafneſs. 6. It removeth Rheume. 7. It ſuffereth not gray-hairs. 8. It preſerveth youth, *&c.*

When this water hath done diſtilling, then increaſe the fire, and there will diſtil a red water.

1. If you put one drop of this water in your hand, it will immediately penetrate it, whereby it ſheweth its vertues in Contractures. 2. It is a very good remedy in the Falling-ſickneſs, if the inward parts are alſo comforted with convenient medicins. 3. It preſerveth a dead body for ever from corruption. 4. It taketh away forgetfulneſs, proceeding from any infirmity; and comforteth the Memory. 5. It cureth the Crook-back, if it be rightly applyed.

An excellent Sanative Oyl for Wounds and Burſten-billies.

Take the flowers of Roſemary,
Borrage,
Bugloſs.
Camomile,
Violets,
Roſes, of each a handful.

Stæca-

Stæcados, or Cotten-weed, half a handful.
Bay-leaves,
Marjoram,
Sage, of each half a handful.

Let them be cut very ſmall, and let them ſtand two days with the beſt Wine, then diſtil it. In this diſtilled Liquor put

Turpentine half a pound,
of the beſt Frankincenſe,
Maſtick,
Bdellium,
Anacardium, of each 2. drams.

Beat them together, and macerate them in the ſaid water for two days, then diſtil them together, and add to it

Nutmegs,
Gilly-flowers,
Cubebs,
Mace,
Ginger,
Cardamoms, of each 2 Scruples.
Lignum Aloes, half a dram.
Amber,
Musk, of each half a ſcruple.

Powder them all, and digeſt them in the aforeſaid water in heat for two days, then diſtil them; and at laſt encreaſe the fire, and you will have a moſt excellent Oyl, which you may uſe with very proſperous ſucceſs.

A notable Water againſt the Falling-Sickneſs.

Take Juniper-berries ſix ounces,
Zedoary,
Gallingal, of each ſix drams.
Saffron 2. drams.
Lavender,
Sage, of each one handful.
Powder of Gems,
Diacaſtoreum, of each a dram and an half.

Digeſt them for a moneth in a Glaſs with Wine, three times recti-

rectified in the Sun, then distil it in an Alembick, the dose is evening and morning half an Egg-shel full.

A most Excellent Water, reviving the natural and lively colour, and preserving the health of Man.

Take Cinamon
Gilly-flowers
Ginger
Saffron
Cubebs
Grains of Paradise, of each two drams,
The Powder of *Dia-margaritum*
of Gems
of Pearls, of each one dram;
the shels of Grains
Zedoary
Galingal, of each a dram and a half;
Lavender
Bay-berries
Bay-leaves
Musk
Amber, of each half a dram.

Powder them, and add Rose-water 2 pounds, *Aqua-vitæ* rectified 4 pounds, put them in a Glass vessel well closed, and digest them in the Sun, or other convenient heat 14 days, then distil it. Drink this water every morning, and wash your face with it.

A very excellent Anti-Epileptick Water.

Take Venice Turpentine 18. ounces.
Male-Frankincense 2 ounces,
Lignum-Paradise 6. drams
choise Mastick
Rosemary-flowers
Nutmeggs
Galingal
Cinamon, of each one ounce and a half,
Oriental Saffron five drams

Fennel

Fennel-ſeeds,
Bay-berries, of each one ounce,
the beſt ſpirit of Wine eight pounds.

Let them ſtand together four days, and then be diſtilled *per Alembicum.*

How effectual this Water is in theſe following diſeaſes, let them teſtifie, that for theſe many years have made experience thereof, to their great benefit, *viz.*

For thoſe that are out of their mind, and in all diſeaſes of the head; as the Epilepſie
Apoplexy
Palſie
Vertigo
Trembling
Lethargy, and ſuch others, as well inwardly as outwardly adminiſtred.

A Water effectual in any diſeaſes in the Joynts, ariſing from cold Rheumes, or any other cauſes.

Take Hungarian Vitriol 2. pounds,
White Tartar one ounce and a half,
Mummy
Maſtick
Frankincenſe
Myrrhe, of each 2. ounces,
Ammoniack
Bdellium
Opopanax, of each one ounce and a half,
Hony 2. pound,
rectified ſpirit of Wine 6. pound.

Diſtil it in *Balneo Mariæ*, and cohobate it five times.

Its uſe is, heat it a little in a ſilver Spoon, and anoynt the place grieved with old linnen rags dipped in it.

The Oyl of the Philoſophers, not common.

Take pure fine Wax 12. ounces,

Venice-Turpentine 18. ounces,
Benjamin 2. drams,
rectified Spirit of Wine 30. ounces,
Common Aſhes 6. ounces.

Mix them, and diſtil them in a Retort according to Art, and there will firſt come the Phlegm, then the Water, and laſtly, the Oyl; which you ſhall ſeparate every one apart, and ſo keep them for theſe uſes:

The Phlegm being applyed to painful Ulcers, immediately mitigateth the pain.

The Water is good againſt the Peſtilence, and alſo the Pin and Web in the Eye.

But the Oyl is of infinite vertues.

1. If any one be wounded, let him anoint the wound with this Oyl, and take every morning and evening three drops in warm Wine, and he ſhall be cured without any other medicine.

2. If any one be troubled with the Strangury, or obſtruction of the Urin, let him take three or four drops.

3. It is good againſt the pain of the ſide, or Pleuriſie.

4. It killeth Worms.

5. It removeth the Cough and Rheums.

6. It is a remedy not to be neglected in Fevers.

7. It comforteth all the weaker parts.

8. It cureth thoſe ſick of the Peſtilence, even to a Miracle.

Oleum Benedictum.

Take the whites of Eggs boyled 12. ounces,
Venice-Turpentine 14. ounces,
Myrrhe 3. ounces,
Camphire 2. ounces

Mix them, and diſtil them in a Glaſs Retort with a gentle fire, encreaſing the fire by degrees, and the Oyl will diſtil.

1. This Oyl wonderfully cureth the wounds of the head, conſolidateth it, and taketh away the pains, and preſerveth it from ſubſequent ſymptoms.

2. In other periſhing and tormenting wounds, inject two or three

three drops, and it immediately mitigateth the pains, and will cure the wound.

An Artificial Balsom.

Take Turpentine 2. pound,
Oyl of Bays 4. ounces,
Galbanum 3. ounces,
Gum-Arabick 4. ounces,
Olibanum
Myrrhe
Gum-Hedera, of each 3. ounces,
Lignum-Aloes
Galingal
Gilly-flowers
the Greater and Lesser-Comfry
Cinnamon
Nutmegs
Centaury
Ginger
White-Dittany, of each 1. ounce,
Musk
Ambergreise, of each 2 drams,
of Rectified Spirit of Wine 6. pound.

Distil them by Retort, and there will come a white water with a yellow Oyl, assoon as it inclineth to a blackness, increase the fire until no more proceed.

1. This water is good for the Sight, and preserveth the Members.
2. It breaketh the Stone, and provoketh Urine.
3. It cureth all wounds, if they are washed therewith, and Tow moistned with it applyed.
4. It is good in the Sciatica and Gout.
5. It taketh away the Cough, and stoppeth Rheumes.
6. It easeth all pains in an instant.

The Oyl is effectual against

1. Baldness.
2. Poysonous corroding Ulcers.
3. The Leprosie.
4. It preserveth the Brain and Stomach.
5. It plainly resolveth all Tumors.
6. It cureth Quartane-Agues.

A Compounded Oyl against the Megrim.

Take Rue one handful, boyl it in a pound of Oyl of Olives, in a new pot for half an hour, then put it in a Retort, to which add Venice-Turpentine 12. ounces; Colophonia 4. ounces: Distil them in Sand, separate the first water that comes, being of no worth; then increase the firs by degrees, and the Oyl will distil, which keep by it self: which you must use at the time of the Fit, warm a little of it at the fire, and with Cotton moistned in it, anoint the Fore-head and Temples, and the parts grieved, when the Patient is lying down.

A Compound Oyl for the Suffocation of the Matrix.

Take Powder of Rue, a little dryed, one pound,
Castoreum 2. ounces,
Olibanum
Myrrhe, of each 4 ounces,
Linseed Oyl one pound and a half.

Let them be digested 4. days, *in Ventre Equino*, or such like heat; afterwards distil it by a Retort in a close Reverberatory.

With this Liquor anoint the Navil morning and evening.

Of

Of MINERALS.

BOOK III.

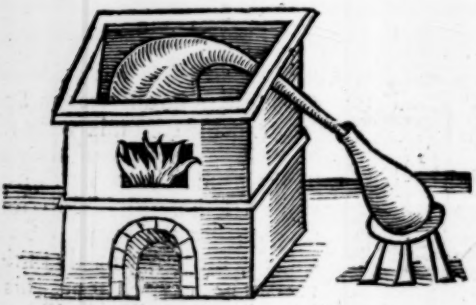
Spirit of Salt is made thus.

TAke of the best Bay-salt as much as you please, let it be dissolved in Spring-water, and filtred, mix with this Brine in a Copper-vessel, of the powder of Bricks or Tiles, twice or thrice as much as the Salt, before its dissolution, was in weight; let the water vapour away over the fire (continually stirring of it) until it be dry; Then put this Powder into a Glass Retort well luted, or an Earthen Retort, and put into a Furnace (a large Receiver joyned to it according to Art) then give fire to it by degrees, until it will bear an open fire, for the space of 12. hours. Thou shalt have a very acid Oyl or Spirit in the Receiver: That Liquor being put into a Retort in Sand, may be rectified by the vapouring away of the flegm; then keep it for use in a Glass very well stopt, that no air go in.

Spirit of Salt is very good in Feavers putrid, as in Hydropical,

A Retort and it's Receiver before they be ſet on work.

A Retort with its Receiver ſet on work.



Oyl, or Spirit of Salt, may alſo be made after this manner.

Take one part of Salt, and three parts of powder of Bricks or Tiles, and mix them together, and put them into a Retort, either of Glaſs, or Earth, to which put fire as before.

After this manner you may make Oyl, or Spirit of

Nitre
Salt Gem
Alum.

Note

Note, that these Salts must first be calcined, which is done by exhaling their flegm.

How to make a white acid, and a red volatile Spirit, out of Salt-Nitre.

Take two parts of Allome, and one of Salt-Nitre; make them both into powder, mix them well together, and cast into the Still a little and a little thereof, as above in the making of other spirits hath been taught; and there cometh over an acid spirit, together with the volatile spirit; and so many pounds as there is of the materials, which are to be cast in, so many pounds of water must be put into the Receiver; to the end that the volatile spirits may so much the better be caught and saved. And when the distillation is performed, the two spirits may be separated by the means of a gentle rectification made in *Balneo*; and you must take good heed, that you get the volatile spirit pure, by changing the Receiver in a good time, so that no flegm be mixed with the red spirit, whereby it will be weakened and turn white. The mark whereby you may perceive, whether the spirit or the flegm doth go forth, is this: when the volatile spirit goeth, then the Receiver looketh of a deep red: and afterward when the flegm doth come, the Receiver looks white again: and lastly, when the heavy acide spirit goeth, then the Receiver to be red again, but not so as it was, when the first volatile spirit came over.

Of the use of the red volatile Spirit.

This Volatile Spirit (which being quite freed from flegm remaineth alwayes red, and doth look like bloud,) in all occasions may be accounted like in vertue unto the former sulphureous spirits; especially in extinguishing of inflammations and Gangrenes, it is a great treasure, the clothes being dipt in it, and laid upon the grieved place: Also it goeth almost beyond all other medicines in the Erysipelaes and Colick: and if there be any congealed bloud in the body (which came by a fall or blow) this spirit outwardly applyed with such waters as are proper

proper for the grief, and alſo taken inwardly, doth diſſolve and expel it: and being mingled with the volatile ſpirit of Urine it doth yield a wonderful kind of Salt, as hereafter ſhall be taught.

The uſe of the white acid Spirit of Salt-Nitre.

The heavy and corroſive Spirits of Salt-Nitre is not much uſed in Phyſick, though it be found almoſt in all Apothecaries ſhops, and there is kept for ſuch uſe, as above hath been mentioned in the ſpirit of Vitriol; *viz.* to make their conſerves and cooling-drinks taſt ſowriſh. Alſo it is uſed by ſome in the Colick; but it is too great a corroſive, and too groſs to be uſed for that purpoſe; and although its corroſiveneſs may be mitigated in ſome meaſure, by adding of water thereto, yet in goodneſs and vertue it is not comparable at all to the volatile ſpirit, but is as far different from it, as black from white, and therefore the other is fitteſt to be uſed in Phyſick; but this in dealing with metals and minerals, for to reduce them into vitriols, calxes, flores, and crocus.

To turn Salt-peter into a Water by a meer digeſtion.

Take of Salt-peter powdered very ſmall, with it fill the fourth part of a Bolt-head, cloſe it well, and let it ſtand in the heat of aſhes, or ſand, the ſpace of ſix weeks, and you ſhall ſee good part of it turned into water: continue it in the ſaid heat till it be all diſſolved.

This is of incomparable uſe in Feavers, and againſt Worms, or any putrefaction in the body, and indeed, a moſt rare ſecret.

Spirit of Salt-Armoniack.

Diſſolve Salt-Armoniack in diſtilled Spirit of Urine over a moderate heat; in this Spirit let Bricks beaten into ſmall pieces, and made red-hot be quenched, till they have imbibed all the water, then make diſtillation in a Retort in ſand, or in a naked fire.

This Spirit is of greater ſtrength then that of other Salts.

Another

Another way,

Take of Salt-Armoniack one part, of *Lapis Calaminaris* two parts, beat them ſmall and mix them well together; and diſtil them in a Glaſs Retort in Sand; firſt with a very gentle fire, and the flegm will come over, which (if you will have your Spirit very ſtrong) you may take away: Then increaſe the fire by degrees; and you have the true Spirit of Salt Armoniack, very powerful and effectual in many operations.

Oyl or Spirit of Vitriol made thus.

Take of Hungarian, or the beſt Engliſh Vitriol, as much as you pleaſe, let it be melted in an earthen veſſel glazed, with a ſoft fire, that all the moiſture may exhale, continually ſtirring of it, until it be brought into a yellow powder, which muſt be put into a Glaſs Retort well luted, or an earthen Retort that will endure the fire: Fit a large Receiver to the Retort, and cloſe the joynts well together; then give it fire by degrees, till the ſecond day; then make the ſtrongeſt heat you can, till the Receiver (which before was dark with fumes) be clear again; let the liquor that is diſtilled off be put into a little Retort, and the flegm be drawn off in ſand; ſo will the Oyl be rectified, which is moſt ſtrong, and ponderous, and muſt be kept by it ſelf.

Many call that flegm, which is drawn off in rectifying the Spirit of Vitriol.

This Oyl (or Spirit) is very excellent in putrid Feavers, reſiſting putrefaction; alſo it opens all obſtructions, and is very diuretical.

A red and heavy Oyl of Vitriol.

Take of calcined Vitriol one part, Flints groſſely powdered 2. parts; of theſe with Spirit of Wine make a Paſte, diſtil it in a Retort, and there will come forth a red heavy Oyl.

This is to be uſed rather about metals then in the body, only, if the ſcurfe on the head be anointed therewith two or three times in a week, it will fall off, and the head be cured.

To dulcifie the Spirit of Vitriol, and of Salt.

Take the Spirit of Vitriol, or of Salt, the best Spirit of Wine, of each half a pound; distil them in a Retort together, three or four times, and they will be united inseparably, and become sweet.

Some put 8. ounces of the best Sugar-candy to these Spirits before they be thus distilled.

Ten or twenty drops of this compound Spirit (being taken in any appropriated Liquor) is very good in any putrid or Epidemical disease.

Gilla Theophrasti, or a most delicate vomitting Liquor made of Vitriol.

Take of Crystals made out of Copper, or Iron, dissolve them in the acid flegm that first comes forth in the distilling off common Vitriol circulate them 8. days.

This Liquor must be taken in Wine, and it causes vomiting instantly, and is most excellent to cleanse and strengthen the stomack, and to cure all such distempers that arise from thence, as Salt-defluxions, Feavers, Worms, Head-ach, and Vertigoes, the Hysterical passion, and such like.

The dose is from a scruple to two scruples.

Oyl of Sulphur per Campanam.

Take a large Iron Vessel like a Platter, over it hang a Glass-bell, that hath a nose like the head of a cold Still; fill the lower vessel, being narrower then the compass of the Bell, or Head, with Brimstone, or Sulphur, inflame it; so will the fume which ariseth from thence be condensed in the Bell into a liquor which will drop down through the Nose into the Receiver.

Note, that the Bell must hang at such a distance from the other vessel, that the flame of the Sulphur touch it not, according to this following example.

If

If (in ſtead of this broad veſſel) you take a large Crucible and melt it in Salt-Peter, and caſt Sulphur upon it thus melted, you ſhall make a great deal quicker diſpatch.

This Spirit is of the ſame nature, and hath the ſame operations as Oyl of Vitriol.

There is lately diſcovered by an Ingenious *Italian* Chimiſt, living in *Fan-church-ſtreet*, a better way of drawing this Oyl of Sulphur, which is by a Campane, or Bell, which hath a Pipe perpendicular and open at the top for the Flowers of the Sulphur to fly away, which hinder the condenſation of the Spirit. By which means a farr greater quantity of Spirit may be drawn in a leſs time than the other; and ſo conſequently much more effectual in the cure of diſeaſes.

Of the Spirit or acid Oyl of Sulphur according to Glauberus.

To reduce Sulphur into a ſowre Spirit or Oyl, hath been ſought hitherto by many, but found by few. Moſt of them made it

in Glaſs-bels, but got very little that way; for the Glaſſes being quickly hot, could not hold the Oyl, ſo that it went away in a ſmoak. Some thought to get it by diſtilling, others by diſſolving, but none of all theſe would do the feat: Which is the reaſon why now adayes it is found almoſt no where right: In the Drugſters and Apothecaries ſhops, they uſually ſell Oyl of Vitriol inſtead of it, which by far is not to be compared in vertue to the Oyl of Sulphur: For this is not only of a far pleaſanter ſowr taſte, but (in efficacy alſo much) exceeds the other. And therefore being of ſo great uſe both in Phyſick and Alchymie; as in all hot diſeaſes, mingling the Patients drink therewith, till it get a pleaſant ſowr taſte, for to quench the intolerable drowth, to ſtrengthen the Stomach, to refreſh the Lungs and the Liver: Alſo externally for to cure the Gangrene: Alſo for to cryſtalliſe ſome Metals thereby, and to reduce them into pleaſant Vitriols, uſeful as well in Alchymie as Phyſick; I thought good to ſet down the preparation, though it be not done in this our diſtilling Furnace, but in another way by kindling and burning it as followeth.

Make a little Furnace with a grate, above which a ſtrong Crucible muſt be faſtned, reſting on two Iron-bars; and it is to be ordered ſo, that the ſmoak be conveighed (not above by the Crucible, but) through a Pipe at the ſide of the Furnace: the Crucible muſt be filled with Sulphur even to the top; and by a cole-fire without flame be brought to burn, and kept burning. Over the burning Sulphur, a veſſel is to be applyed of good ſtony earth, like unto a flat diſh with a high-brim, wherein is always cold water to be kept, and whereunto the burning Sulphur doth flame: Which thus burning its fatneſs conſumeth, and the acid Salt is freed and ſublimed to the cold veſſel; where it is diſſolved by the air, and (in the form of a ſharp Oyl) runs from the hollow veſſel into the Receiver; which muſt be taken off ſometime, and more Sulphur ſupplyed in ſtead of that which hath been conſumed, to the end that the Sulphur may ſtill burn in the crucible, and beat with the flame to the cold head: and within few days you will get a great quantity of Oyl, which elſe by the (*campana*) Glaſs-bell, in many weeks could not be done.

N. B.

N. B. Such a sowr Spirit (or Oyl) may also be got by distillation, together with the flores, *viz.* thus: If you take pieces of Sulphur, as big as Hens-eggs, and carry them (one after another) into the hot distilling vessel, a sowr Oyl together with flores will come over into the Receiver, which must with water be separated out of the flores and the water abstracted from it again, in a Cucurbit; and in the bottom of your Glass-body you will find the Oyl, which in vertue and taste is equal to the former, but you get nothing neer so much in quantity by this way; and if you do not look for the Oyl, you may leave it with the Flores, which by reason of their pleasant acid taste are much toothsomer to take then the ordinary ones.

The Oyl of Sulphur is made after a more Philosophical manner thus.

Take of crude Sulphur as much as you please, put it into a melting vessel, to be dissolved over the fire: being dissolved, pour it forth into seething hot water (this do ten or more rimes, remembring that the water must be alwayes seething hot) and thou shall see that the Sulphur will be like Butter, then put it into a Retort, pouring on it the best Spirit of Wine; then distill it with a soft fire, and there will come forth an Oyl of a golden colour, of a good taste and smell, which is the true Balsome of Sulphur. The Oyl that swims on the Spirit must be separated.

This Oyl for the cure of all distempers of the Lungs, for all Feavers, whether putrid or pestilential, and the cure of Wounds and Ulcers, is scarse to be equalled.

The Essence of Sulphur.

Take of Sulphur-*vivum* as much as you please, dissolve it as well as you can in *Aqua-fortis*, (made of Vitriol, and Salt-peter;) then evaporate the *Aqua-fortis*, and then reverberate the matter, till it become very red; Extract the Tincture with Spirit of Wine, then digest them till the essence be separated from the Spirit like an Oyl, and sink to the bottom.

This Essence also is of wonderful vertue against all putrefaction both inward, and outward, a great preservative against the plague, and is wonderful balsamical, and cureth all sores both old and new, even to admiration.

The Oyl of Arsenick is made thus.

Take of Crystalline Arsenick (being first sublimed with *Colcothar* alone) as much as you please, mix it with an equal weight of the Salt of Tartar, and Salt-peter; and let them be betwixt two little pots or crucibles (whereof the upper hath a hole) calcined, until no fume ascend. The matter being thus calcined, dissolve in warm water, that you may draw a Salt from thence; the powder which fals to the bottom imbibe with the liquor of Tartar, and dry it by the fire, and this thou must do three times; then dissolve the matter in warm water, that thou maist draw out the Salt thereof, and there will remain a most white powder, and fixed, which in a moist place, will be dissolved into a liquid matter like Oyl, or Butter,

Of the Nitrous Spirit of Arsenick.

If you take white-Arsenick and pure Salt-Nitre of each a like quantity, ground into fine powder, and distil them, you will get a blew Spirit, which is very strong; but no water must be put into the Receiver, else it would turn white; for Arsenick, from which the blew cometh, is precipitated by the water. This Spirit dissolveth and graduateth the Copper as white as Silver, and maketh it malleable, but not fix. The remaining *Caput mortuum* maketh the Copper white, if it be cemented therewith, but very brittle and unmalleable; but how to get good Silver out of Arsenick, and with profit, you shall find in the fourth part. In Physick the blew Spirit serveth for all corroding cancrous sores, which if they be anoynted therewith, will be killed thereby, and made fit for healing.

To

To make a Spirit of Sulphur, Crude-Tartar and Salt-Nitre.

If you grinde together one part of Sulphur, two parts of Crude-Tartar, and four parts of Salt-Nitre, and diſtil it Philoſopher-like, you will get a moſt admirable Spirit, which can play his part both in Phyſick and Alchymie. I will not adviſe any body to diſtil it in a Retort; for this mixture, if it groweth warm from beneath, it fulminateth like Gunpowder; but if it be kindled from above, it doth not fulminate, but only burneth away like a quick fire: metals may be melted and reduced thereby.

To make Spirits and Flores of Nitre and Coals.

If you diſtil Nitre (well purified from its ſuperfluous Salt) mixed with good Coals, the Egyptian-Sun-bird doth burn away, and out of it doth ſweat a ſingular water, uſeful for men and metals. It's burnt aſhes are like unto calcined Tartar, and for the purging metals not to be deſpiſed.

Aqua-fortis, *or a ſtrong Spirit, (that will diſſolve Silver and baſer metals) is made thus.*

Take of Vitrial calcined 2. parts of Nitre one part, grind and mix them well together, and put them into a Glaſs Retort coated, or earthen Retort that will endure the fire, and ſet them into the Furnace in an open fire, and then having fitted a large Receiver, diſtil it by degrees the ſpace of 24. hours, then rectifie the Water or Spirit in Sand.

Aqua-regia, *or* Stygia, *or a ſtrong Spirit that will diſſolve Gold, is made thus.*

Take of Nitre 2. parts, Salt-Armoniack one part, the powder of Flints 3. parts, put them into a Glaſs Retort coated, or earthen Retort that will endure the fire; diſtil them by degrees over a naked fire for the ſpace of 12. hours, take it out and rectifie it. This Water will diſſolve Gold.

Another

Another Aqua-regia *is made thus.*

Take of Spirit of Nitre, as much as you please, put a dram of crude Salt-Armoniack to every ounce of it, and it will be as strong as any *Aqua-regia.*

This water will dissolve Gold.

To make a most strong and vehement Aqua-Regia.

Take of the strongest *Aqua-fortis* that you can get, and well rectified, a pound, of Mercury sublimed four ounces, salt-Armoniack twenty ounces, mix all these together, and distil them.

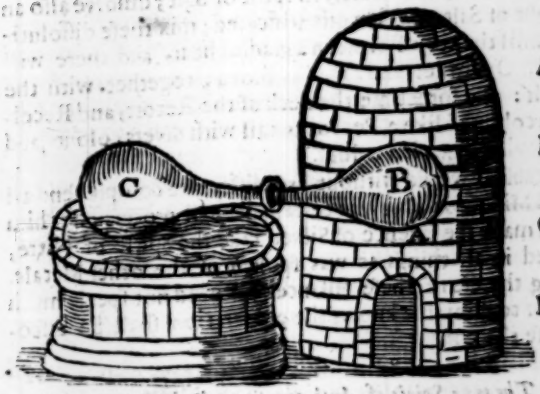
Oyl, or Butter of Antimony, is made thus.

Take of crude Antimony as much as you please, of sublimed Mercury a like quantity, make them both into a very fine powder, and mix them, and put them into a Glass-Retort. Give fire by degrees in a close Reverberatory, or let the Distillation be made in Sand. There will distil into the Receiver a fatness; part whereof (sticking to the neck of the Retort) will melt by a light fire being put to it. That fatness may be rectified in a Retort, and either be kept by it self as it is, or set in a Cellar or moist place, and be resolved into a Liquor.

This Oyl might be washed in good store of water, and then there will settle to the bottom a white powder, which being oft washed in fair water, till all the sharpness is gone, is then called *Mercurius vitæ*, six or seven grains whereof is an excellent vomitting medicine.

A Fur-

A Furnace for a close Reverberation furnished with its Retort and Receiver.



A. *Shews the Furnace.*

B. *The Retort.*

C. *The Receiver.*

D. *The Vessel filled with cold water.*

How to make a Water out of Antimony, whereof a few drops shall purge, or sweat, and which hath neither smell, or scarce any taste.

Take flowers of Antimony, sublime them with Salt-Armoniack six or seven times, then wash away the Salt with warm water, and dry the powder, which then lay thin on a Marble in a Cellar till it be dissolved, (which will be in six weeks time). This water, if it be taken to the quantity of twenty drops, will purge, if in a lesser quantity, it will sweat.

To make an Oil, or Quintessence, of Metals.

Dissolve what Metal, or Mineral you please, in a strong Spirit of Salt, (except silver, which must be dissolved in *Aqua-fortis*) draw off the flegm in *Balneo*, pour on rectified Spirit of Wine, digest them so long till a red Oil swim above, which is the Quintessence of Metals, and Minerals, and is a very great secret.

A ſweet and red Oyl of Metals and Minerals.

Diſſolve a Metal, or Mineral, in ſpirit of Salt; diſſolve alſo an equal weight of Salt of Wine eſſentificated; mix theſe diſſolutions, and diſtil them by Retort in a gradual heat, and there will come out an Oyl ſweet, and as red as bloud, together with the ſpirit of Salt: and ſometime the neck of the Retort, and Receiver will be coloured like a Peacocks-tail with divers colours, and ſometimes with a golden colour.

And becauſe I would without any difference comprehend all Metals and Minerals under one certain general proceſs; let him that would make the Eſſence of Silver, take the Spirit of Nitre, and proceed in all things as was ſpoken of the other Metals. Concerning the uſe of theſe Eſſences, I need not ſpeak much thereof; for to him that knows the preparation ſhall be diſcovered the uſe thereof.

The true Spirit of Antimony is made thus.

Take of the ſubtile powder of the *Regulus* of Antimony as much as you pleaſe, ſublime it of it ſelf till it will ſublime no more (ſtill putting what is ſublimed to that which remains at the bottom) or with ſalt-Armoniack ſix or ſeven times (remembring that then you muſt dulcifie it with warm water, by diſſolving therewith the Salt) and dry the Precipitate afterwards. Set this fixed powder in a cellar, laying it very thin upon a Marble-ſtone, and about ſix weeks, or two months, it will all be diſſolved into water, which muſt be filtred. Then evaporate part of this water, and let it ſtand two or three days in the cellar to cryſtallize. Theſe Cryſtals purifie, and dry: Mix them with three times the quantity of the groſs powder of Tiles, and diſtil them in a Retort, and there will come forth firſt a white Spirit, and then a red, which you may rectifie in *Balneo*.

The true Oyl or Eſſence of Antimony is made thus.

Take of the foreſaid Cryſtals; diſſolve them in good rectified Spirit of Wine, digeſt them two months in *Balneo*, or Horſe-dung:

dung: then evaporate the Spirit of Wine, and there will remain in the bottom the true Oyl or Eſſence of Antimony.

Then take new Cryſtals of Antimony, and let them imbibe either this Oyl, or the foreſaid Spirit, till they will imbibe no more, then digeſt them two months in ſand, and they will become a flowing fixt Salt, and of excellent vertue

The aforeſaid Spirit, this Oyl, and Eſſence of Antimony, may be equallized to *Aurum potabile*, to all intents and purpoſes, according to a medicinal uſe, eſpecially the fixt Eſſence. The doſe is five or ſix grains.

A burning Spirit made out of Lead, moſt fragrant and Balſamical.

Take the Calx of Saturn, or elſe Minium, pour upon it ſo much Spirit of Vinegar, that may cover it four fingers breadth; digeſt them in a warm place the ſpace of twenty four hours, often ſtirring them, that the matter ſettle not too thick in the bottom: then decant the *Menſtruum*, and pour on more, digeſt it as before, and this do ſo often, until all the ſaltneſs be extracted. Filter and clarifie all the *Menſtruum*, being put together, then evaporate it half away, and ſet the other part in a cold place till it cryſtallize. Theſe Cryſtals diſſolve again in freſh Spirit of Vinegar; filter and coagulate the Liquor again into Cryſtals, and this do ſo often, until they be ſufficiently impregnated with the ſalt-Armoniack of the Vinegar as with their proper ferment. Digeſt them in a temperate *Balneo*, that they may be reſolved into a Liquor like Oyl: Then diſtil this Liquor in ſand, in a Retort, with a large Receiver annexed to it, and well cloſed, that no ſpirits evaporate, together with the Obſervations of the degrees of the fire: then there will diſtil forth a ſpirit of ſuch a fragrant ſmell, that the fragrancy of all flowers, and compounded perfumes are not to be compared to it. After Diſtillation, when all things are cold, take out, and caſt away the black feces which is of no uſe: Then ſeparate the yellow Oyl, which ſwims on the top of the Spirit, and the bloud red Oyl which ſinks to the bottom of it: Seperate the flegm from the Spirit in *Balneo*. Thou ſhalt by this means have a moſt fragrant Spirit, that even raviſheth the ſenſes, and ſo Balſamical, that it cures all old

and new ſores inward and outward, and ſo cordial, that the dying are with admiration revived with it.

They that have this medicine need ſcarce uſe any other either for inward, or outward griefs.

How to turn Quick-ſilver into a Water without mixing any thing with it, and to make thereof a good Purgative and Diaphoretick Medicine.

Take an ounce of Quick-ſilver not purified, put it into a bolt-head of glaſs, which you muſt nip up, ſet it over a ſtrong fire in Sand, for the ſpace of two months, and the Quick-ſilver will be turned into a red ſparkling Precipitate. Take this powder, and lay it thin on a Marble in a Cellar for the ſpace of two months, and it will be turned into a water, which may be ſafely taken inwardly; it will work a little upward and downward, but chiefly by ſweat.

Note, that you may ſet divers Glaſſes with the ſame matter in the ſame Furnace, that ſo you may make the greater quantity at a time.

I ſuppoſe it is the Sulphur which is in the Quick-ſilver, and makes it ſo black, that being ſtirred up by the heat of the fire fixeth the Mercury.

A fragrant Oyl of Mercury.

Take of Mercury ſeven times ſublimed, and as often revived with unſlaked Lime, as much as you pleaſe, diſſolve it in Spirit of Salt in a moderate heat; then abſtract the Spirit of Salt, and edulcorate it very well by boyling it in Spirit of Vinegar: then abſtract the Spirit of Vinegar, and waſh it again with diſtilled rain-water: then dry it, and digeſt it two months in a like quantity of the beſt rectified Spirit of Wine you can get. Diſtil them by Retort, making your fire moderate at the beginning, afterwards increaſing it; then evaporate the Spirit of Wine in *Balneo*, and there will remain in the bottom a moſt fragrant Oyl of Mercury.

This Oyl ſo purifies the bloud by ſweat, and urin, that it cures all diſtempers that ariſe from the impurity thereof, as the veneral diſeaſe, *&c.*

The truth is, they that have this medicine well made, need but few other medicins: the doſe is four or five drops.

To

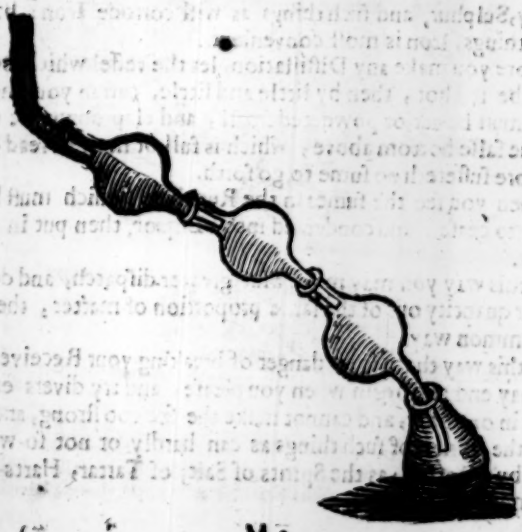
To make the Water of Mercury.

Take Mercury sublimate, and Sal-Armoniack, and sublime them together; then grind that which is sublimed, with that which remained after sublimation, and put it to sublime again, and there will remain more in the bottom of the Sublimatory than there did the first time, which work repeat so often, till all remain in the bottom, and look black, and melt like wax; which take and bruise small, and set in a cold Cellar on a Marble-stone, and it will dissolve into a Water of Mercury, which you may coagulate and dissolve till it be pure.

To turn Mercury into a Water by it self.

Set this following vessel, being made of Iron, into a Furnace, so that the three bowles thereof be within the Furnace, and the Pipe and Receiver be without. Make your Furnace so, as that there be a great hole left open at the top: where you must put in your coals, shutting it afterward with a cover of stone made fit thereunto; on the top also must be holes to let in air.

The Vessel for this Operation.



First make your Iron vessel as red hot as possibly it can be made, (or else you do nothing) having first annexed an earthen well glazed Receiver to the bottom of it. Then put half an ounce of Quick-silver at a time in at the top, (which presently stop with clay) and presently the Mercury will come over, part in a sharp Liquor, and part as crude a Mercury as it was before, which you may put in again till it be all turned to water.

Note, that unless the Quick-silver give a great crack presently after it is put in, it is a sign that the vessel was not hot enough.

This operation being well prosecuted, may produce a medicin with which none under the Philosophers Elixir may compare.

How to distil Spirits, and Oyls out of Minerals, Vegetables, Bones, Horns, and faster, and in a greater quantity in one hour, than in the common way in twenty four.

The Furnace must be twice so high, as wide, and the Pipe must be a foot-long out of the Furnace.

The Vessel walled in must be of earth for the distilling of Antimony, Sulphur, and such things as will corrode Iron: but for other things, Iron is most convenient.

Before you make any Distillation, let the vessel which is walled in be red hot, then by little and little, cast in your matter, which must be cut, or powdered small, and clap down the cover into the false bottom above, which is full of molten lead, and therefore suffereth no fume to go forth.

When you see the fumes in the Receiver (which must be of Glass) to cease, and condensed into a Liquor, then put in more matter.

By this way you may make a far greater dispatch, and distil a greater quantity out of the same proportion of matter, then by the common way.

By this way there is no danger of breaking your Receiver, and you may end and begin when you please, and try divers experiments in one hour, and cannot make the fire too strong, and may make the spirits of such things as can hardly or not so well be made by Retort, as the Spirits of Salt, of Tartar, Harts-horn, Antimony, &c.

This

This must be done in such a Furnace as this.

A, Signifies the Furnace with its Iron, or earthen distilling vessel walled in, to which a very large Recipient is joyned. B, the Distiller, who with his left hand taketh off the cover, and with his right casteth in his prepared matter with an Iron-ladle. C, the form of the distilling vessel. D, the same, as it appeareth inward. E, the form of the vessel not walled in, but standing on the coals for other uses.

Salt

Salt and ſuch things as will flow muſt have bole, or powder of Brick mixed with them before they be caſt into the veſſel, or if you pleaſe, you may firſt diſſolve what Salt you pleaſe, and with red hot groſs powder of Brick, imbibe the water, then caſt in this powder by little and little into the diſtilling veſſel, and the Salt by this means will yield its Spirit quickly and in aboundance. By either of theſe two wayes you make a pound of the Spirit of Nitre in an hour, and of Salt in two hours.

Now whereas ſome things yield a Spirit, and a thick and heavy Oyl, they may be rectified thus: *viz.* by putting them into a Retort, and diſtilling them in ſand, or aſhes, with a gradual heat: there will come forth the flegm of ſome Liquors firſt, and then the Spirit, and of otherſome the Spirit, and then the flegm; but of all theſe the heavy thick Oyl at laſt; which by diſtilling off becomes farr clearer than before, which may again be rectified by Spirit of Salt, as I have ſhewed before, and therefore need not here repeat it.

How to make the acid Oyl and volatile Spirit of Vitriol.

To diſtil Vitriol, there needs no other preparation, but only that it be well viewed, and if there be any filth amongſt it, that the ſame be carefully picked out, leſt being put together with the Vitriol into the diſtilling veſſel, the ſpirit be corrupted thereby.

Now your veſſel being made red hot, with an Iron-ladle caſt in one or two ounces of your Vitriol at once, put on the lid, and preſently the Spirits together with the phlegm will come over into the Receiver, like unto a white cloud or miſt; which being vaniſhed, and the Spirits partly ſetled, carry in more Vitriol, and continue this ſo long, until your veſſel be full: Then uncover your veſſel, and with a pair of Tongs, or an Iron-ladle, take out the *Caput-Mortuum*, and caſt more in; and continue this, proceeding as long as you pleaſe, ſtill emptying the veſſel when it is filled, and then caſting in more matter, and ſo proceeding until you conceive that you have got Spirits enough. Then let the fire go out, and let the Furnace cool; take off the

Receiver;

Receiver, and pour that which is come over into a Retort, and lay the Retort in Sand, and by a gentle fire diſtil the volatile Spirit from the heavy Oyl; having firſt joyned to the Retort the Receiver, which is to receive the volatile Spirit, with a good lute.

All the volatile Spirit being come over, which you may know by the falling of bigger drops, then take off the Receiver, and cloſe it very well with wax, that the Spirit may not make an eſcape; then apply another (without luting it) and ſo receive the phlegm by it ſelf, and there will remain in the Retort a black and heavy corroſive Oyl, which if you pleaſe, you may rectifie, forcing it over by a ſtrong fire, and then it will be clear; if not, let all cool, then take out your Retort together with the black Oyl, and pour upon it the volatile Spirit, which in the rectifying went over firſt; put the Retort into the Sand, and apply a Receiver, and give it a very gentle fire, and the volatile Spirit will come over alone, leaving its phlegm behind with the Oyl, which by reaſon of its dryneſs doth eaſily keep it. Thus the Spirit being freed from the phlegm, is become as ſtrong as a meer fire, and yet not corroſive. And if this Spirit be not rectified from its own Oyl, it will not remain good, but there doth precipitate a red Powder after it hath ſtood for ſome ſpace of time, and the Spirit looſeth all its vertue, in ſo much that it is not to be diſcerned from ordinary water, which doth not happen when it is rectified. The reaſon of this precipitation is no other then the weakneſs of the Spirit, which is accompanyed with too much water; and therefore not ſtrong enough for to keep its Sulphur, but muſt let it fall: but after it is rectified by its own Oyl, it can keep its Sulphur well enough, becauſe then it is freed from its ſuperfluous moiſture. However the red Powder is not to be thrown away, but ought to be kept carefully; becauſe it is of no leſs vertue than the Spirit it ſelf. And it is nothing elſe but a volatile ſulphur of Vitriol. It hath wonderful vertues, ſome of which ſhall be related.

The Use and Dose of the Narcotick Sulphur of Vitriol.

Of this Sulphur 1.2.3.4. or more grains (according to the condition of the Patient) given at once, mitigates all pains, causeth quiet sleep; not after the manner of Opium, Henbane, and other the like medicines, which by stupefying and benumming cause sleep, but it performeth its operation very gently and safely, without any danger at all; and great diseases may be cured by the help thereof. *Paracelsus* held it in high esteem, as you may see, where he doth write of *Sulphur embrionatum.*

To make an Oyl of Lapis Calaminaris.

Take of *Lapis Calaminaris* powdered as much as you please, pour on it five or six times as much of rectified Spirit of Salt; shake them together continually, or else it will be congealed into a hard mass, which can hardly be mollified again: when no more will dissolve *in frigido*; put it in warm Sand so long, till the Spirit of Salt be of a high yellow colour, then pour it off, and put on more, till all be dissolved that will; cast away the feces, put the solution into a Glass-body, and distil it in Sand: about the third part of the Spirit of Salt cometh over as insipid as common water, though the Spirit were well rectified before, for the dryness of the *Lapis Calaminoris* (which is the dryest of all Minerals and Metals except Zink) retaineth the Spirit: after the flegm is come over, let the Glass cool; and thou shalt find at the bottom a thick red Oyl very fat, even as Oyl-Olive, and not very corrosive; keep it from the air, or else it turneth into water.

It is of wonderful vertue for inward, and outward griefs; for it hath in it a pure golden Sulphur.

Common Sulphur mixed with this Oyl, and melted in a strong fire swimmeth like water above, and is transparent.

This Oyl distilled in a Retort with pure Sand in a strong fire, yielderh a Spirit like fire, scarce to be contained in any vessel,

ſel, and diſſolveth all metals, except Silver; and reduceth pure Spirit of Wine into an Oyl within a few dayes.

To make Oyl of Talk.

Take of the beſt Talk reduced into very thin flakes, make them red hot, and then quench them in the ſtrongeſt *Lixivium* that Sope-boylers uſe; do this fifteen times, and it will become as white as Snow: then powder it very ſmall, and Calcine it by fumigation, (*i.*) by the fume of ſome very ſharp Spirit, as of *Aqua-fortis*, or the like: when it hath been thus calcined for the ſpace of a Fortnight, it will become ſomewhat mucilaginous; then ſet it in any heat of putrefaction, as it is (for it hath imbibed enough of the ſharp Spirit to moiſten and ferment it) for the ſpace of two months in a bolt-head nipt up: then evaporate the acid Spirit, and dulcifie it with diſtilled Rain-water. After this, extract what thou canſt out of it with the beſt rectified Spirit of Wine; pour off the ſolution and evaporate the Spirit of Wine, and at the bottom will be a moſt beautiful Oyl. The Oyl is the moſt glorious *fucus* or paint in the World.

To make Oyl of Talk another way.

Take of the foreſaid powder of Talk after it hath been putrified, and again dulcified as much as you pleaſe, put four times as much of the beſt circulated Oyl of Camphire to it, digeſt them in Horſe-dung till all the powder be diſſolved, and the Oyl become mucilaginous, which will be within two months.

This is for the ſame uſe as the former.

There is required a great deal of pains, and care, and no ſmall coſt in the preparation of theſe Oyls.

Oyl is made of Bole-Armoniack, Terra-ſigillata, and ſuch kind of Clay-earths, thus:

Take of either of thoſe Earths as much as you pleaſe, break

it into small pieces, and put it into a Retort over a naked fire for the space of twelve hours, and there will distil into the Receiver (which must be large) the flegm; then white Spirits in a little quantity, yet of a grateful taste and smell.

Oyl out of these kinds of Earth is made better thus.

Take of either of these Earths which you please, as much as you will; pour upon it distilled Rain-water, set it in some warm place for a month, or more, and the Oyliness will separate from its body, of its own accord, and swim upon the water. Separate the water by a Tunnel, and distil the Oyl with five parts of the Spirit of Wine well rectified, and there will come forth an Oyl of a golden colour, swimming on the Spirit, which is a most excellent Balsom.

Spirit of unslaked Lime is made thus.

Take of unslaked Lime as much as thou pleasest; reduce it into a subtle powder, imbibe it with Spirit of Wine most highly rectified, (which must be pure from all its flegm, or else you labour in vain) as much as it can imbibe; draw off the Spirit of Wine with a gentle heat, cohobate it 8. or 10. times, so will the fiery vertue of the Lime be fortified. —— Take of this levigated Lime 10. ounces, pure Salt of Tartar one ounce, the feces of Tartar after the Salt is extracted 11. ounces, mix these well together, put them into a Glass-Retort coted, see that 2. parts of 3. be empty; distil them into two Receivers, the phlegm into one, the Spirit into the other, which must have a little of rectified Spirit of Wine in it to receive the Spirit.

If thou wilt separate the Spirit of Wine, then put fire to it, and the Spirit of Wine will burn away, and the Spirit of the Lime stay behind, which is a kind of a fixed Spirit.

This is a very rare secret for the consuming the Stone in the Bladder, and the curing of the Gout.

Oyl

Oyl made out of Tile-ſtones called the Oil of Philoſophers.

Take of Bricks or Tiles as many as you pleaſe, break them into ſmall pieces, make them red fire hot, then quench them in pure old Oyl Olive (in which let them lie till they be cold) then take them out and grind them very ſmall, let the powder be put into a glaſs Retort, coated, a fit receiver being put thereto and diſtil off the Oyl in a naked fire by degrees, which being diſtilled off keep in a viol cloſe ſtopt.

This Oyl is wonderful penetrating, and is good againſt all cold diſtempers whatſoever.

The Liquor or Water of Coral, is made thus.

Take Salt-Armoniack well purified by ſublimation, of red Coral finely powdered, of each a like quantity; ſublime them ſo often till the Coral will no more riſe up, then take the Calx of Coral that remains in the bottom of the ſublimatory and put it on a marble or glaſs in the cellar to be diſſolved; that which will not be diſſolved, ſublime again, and do as before till all be diſſolved: and ſo thou haſt the Liquor of Coral.

Note, that if thou will have the true tincture of Coral, evaporate the humidity of the foreſaid Liquor, then extract the tincture out of the powder with Spirit of Wine, which Spirit evaporate to the conſiſtency of Hony: And thou haſt a moſt rare medicine.

This Medicine ſtrengtheneth all the parts in the body, and cures all diſtempers that ariſe from the weakneſs thereof.

To make a Water out of Lapis Armenus *that ſhall have neither taſt nor ſmell, a few drops whereof ſhall purge.*

Take of *Lapis Armenus* powdered ſmall, and calcined, as much as you pleaſe, ſublime it with Salt Armoniack until it will ſublime no more, but remain in the bottom of the ſublimatory, then take it out, and lay it very thin upon a marble in a cellar, and there let it lie two months, and it will be almoſt all diſſolved into a liquor.

Or thus.

Take of *Lapis Armenus* powdered ſmall and calcined, as much as you pleaſe, pour upon it of diſtilled Vinegar, as much as will cover it four fingers breadth, then ſet it over a gentle heat ſtirring it 2 or 3 times in an hour, for the ſpace of 6 hours or thereabouts; then the Spirit being tinged very blew with the powder filter off from the feces, then pour more Spirit of Vinegar on the feces, and do as before, till the Spirit be tinged no more; then take all the blew ſpirit, and vapour it away, and at the bottom you ſhall have a ſalt, which you muſt put into a calcining pot, and calcine ſo long in the fire till no more vapour will ariſe, and it become a dark red powder, then put it upon a marble in the cellar for the ſpace of two moneths, and it will be diſſolved into a Liquor, a few drops whereof put into a glaſs of beer will purge delicately.

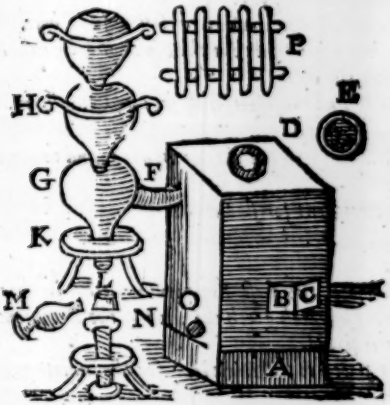
How to make a Furnace that ſhall of it ſelf, without any veſſels which ſhould contain the matter, being put into it, ſublime Minerals, and diſtil all manner of Oyles and Spirits out of Minerals, Vegetables, and Animals, and that in a very great quantity, in a very ſhort time, and with ſmall coſt.

The Furnace is made as followeth: It may be made of one piece by a Potter, or of brick, round, or four-ſquare, greater or leſſer as you pleaſe: if the inſide be one ſpan broad in the middle, it muſt be four high; one for the Aſh-hole, another above the grate to the middle Coal-hole, and two above the Pipe; this pipe being made of earth or iron, muſt be a ſpan long betwixt the Furnace and the Receiver, and a third part as wide as the Furnace within.

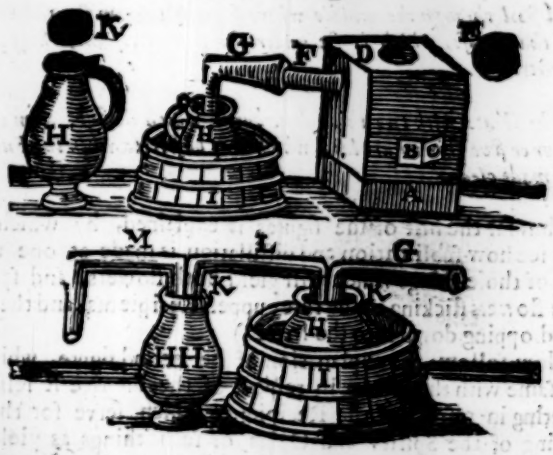
The Recipients muſt be made of glaſs, or very good earth well luted together; the greater the better.

The

The First Figure.



The Second Figure.



A, *Signifies the Ash-hole, which must be as wide as the Furnace, and alwayes open that the fire may burn the stronger.*

B, *The*

B, *The middle hole of the Furnace for the putting in of coals.*

C, *The ſtopple made of ſtone.*

D, *The upper hole of the Furnace with a faſe bottom wherein ſand lyeth, which is there laid that the cover may lie the cloſer, and keep in the fumes the better.*

E, *The Cover, which muſt preſently be clapt on, aſſoon as the matter to be diſtilled is put in.*

F, *The pipe which goeth out of the Furnace, and to which the Receiver is fitted.*

G, *The firſt Recipient for flowers.*

H, *The ſecond.*

I, *The third.*

K, *A Stool whereon the firſt Recipient reſteth, in the midſt whereof is a hole, through which goeth the neck of the Recipient to which another glaſs is fitted.*

L, *The glaſs fitted to the Recipient for the uniting the Spirits that drop down.*

M, *Another Recipient united to the former Glaſs, and into which the united Spirits do run.*

N, *A ſtool through the middle whereof goeth a ſcrew for the raiſing of that glaſs, which is ſet under the firſt Recipient, higher, or lower.*

O,

P, *The Grate with two thick Iron-barrs, which lie faſt, upon which four or five thinner are laid, which may be ſtirred when the Furnace is made clean.*

Thus far the firſt of the figures is explained, by which you may ſee how ſublimation and diſtillation is made at one time, *viz.* of thoſe things which will yield both flowers, and ſpirits, (the flowers ſticking in the three upper Recipients, and the Spirits dropping down into the lower.)

Now follows the explanation of the ſecond figure, which is the ſame with the former in reſpect of the Furnace it ſelf, but differing in reſpect of the Recipients, which ſerve for the receiving of the Spirits and Oyles of ſuch things as yield no flowers: Therefore I ſhall begin with the explanation of the Receivers.

G, *The firſt crooked-pipe as it is fitted to the pipe that comes out of the Furnace.*

H, *The Recipient with its cover, in which is one hole for one crooked-pipe to go through, as you may ſee in the firſt* H, *and two holes for two pipes to go through, as you may ſee in the ſecond* H, *and in* H H.

Note, that theſe pipes may either be faſtened to the cover, being all of one piece, or they muſt be well luted, that no vapours may paſs through. Now you muſt conceive that in the lower Receivers the vapour that goeth out of the firſt pipe goeth firſt into the Receiver, then out of that into the next Pipe, and ſo forward till it cometh into the laſt Receiver, by which means it is much cooled (for indeed ſuch vapours that come out of the Furnace, eſpecially when ſome materials are diſtilled, if there were not ſome ſuch art to cool them, would break all Recipients.)

I, *A Tub of water, wherein the Recipient ſtands, to cool the vapours and condenſe them.*

K, *The firſt crooked pipe as it goeth into the Recipient.*

L, *The ſecond crooked pipe, whereof one end goeth into one Receiver, and another end into another.*

M, *The laſt crooked pipe, to which you muſt annex a Receiver.*

Now the manner of diſtilling is thus: Let the Furnace be full of coals well kindled, then caſt on your matter, and ſtop your Furnace cloſe: This Furnace needs no Retort, or other veſſels to be ſet into it, neither can you do any hurt by too much or too little fire; and you may finiſh your operation when you pleaſe, and in one hour try divers experiments. It ſaveth very much time, and coſt, and in one hour will do as much as can be done in another Furnace in 24. In one hour you may make a pound of Spirit of Salt with four or five pound of coals, and as much flowers of Antimony in a like ſpace of time, and with as few coals.

If your materials be vegetables, or horn, or bones, cut them

ſmall; if hard Minerals, let them be powdered very ſmall, if ſalt, let them firſt be diſſolved in water, which water muſt be imbibed with red hot coals, until all the liquor be imbibed: then caſt in thoſe coals into the Furnace.

If you would by this means procure the Spirit of hard Minerals, as of Antimony, you muſt take them as they come from the Mine, before they have paſſed the fire.

By this Furnace you may make the Spirits of ſuch things, which will not yield them in any other way.

Note, that ſuch Oyls and Spirits as are drawn by this Furnace, muſt be rectified in Spirit of Salt, as I have above ſhewed.

The Way to make Spirit of Salt by this Furnace.

Mix Salt, and Vitriol or Allome together, grinding them very well in a Mortar, (for by how much the better they are ground, the more ſpirit they yield.) Then caſt this mixture into the fire with an Iron-ladle, *viz.* ſo much of it as will be ſufficient to cover the coals, and then with a great fire the Spirits come forth into the Receivers, where being coagulated, they diſtil down into a diſh, and thence into another Receiver. And if thou knoweſt how to work aright, the Spirits will like water continually run out through the pipe the thickneſs of a ſtraw; and thou mayeſt eaſily every hour make a pound of the Spirit. Now the reaſon why thou ſhalt by this way have more Spirits than by the other, is this, *viz.* becauſe the Vitriol, and Allom, which is mixed with the Salt, makes it flow quickly, by which means it is prevented from falling down through the Coals to the lower part of the Furnace, but ſticking to the coals is almoſt all of it turned into ſpirits. The *Caput Mortuum*, which is reddiſh, eaſily falls with the aſhes through the grate, and can no more be diſtilled, but yields by excoction a white fixed Salt, which ſerves for the flowing of metals; and being diſſolved in warm water ſerves alſo for a Glyſter againſt the Worms, which it kills, and purgeth alſo the Bowels.

Thou wilt object, that the ſpirit made after this manner is not the true ſpirit of Salt, by reaſon of the mixture of Vitriol and Allom, but mixed, and compounded. I anſwer; There can by this

this way diſtil no ſpirit of Vitriol, and Allom, being that which I often tryed, caſting Vitriol, or Allom into the Furnace, where I received no Spirit at all; the reaſon of this is, becauſe theſe ſpirits are far more heavy then the ſpirit of Salt, neither can they aſcend ſo great a height, *viz.* of three ſpans, but are burnt, whence unleſs phlegm, nothing diſtils. Wherefore the ſpirit of Salt that is made after this manner is not mixed, but pure and meer ſpirit of Salt, of the ſame taſt, and vertue as that is of, that is made by it ſelf; becauſe in this Furnace the ſpirit of Allome, and Vitriol, cannot be made, unleſs a pipe go out of the Furnace neer the grate, as you may ſee by the delineation of the Furnace, for otherwiſe it cannot be made.

Of the uſe of the Spirit of Salt.

The Spirit of Salt is by moſt accounted a moſt excellent medicine, and ſafely to be uſed as well inwardly, as outwardly: It extinguiſheth a preternatural thirſt in hot diſeaſes, abſtergeth, and conſumeth flegmatique humors in the ſtomach, exciteth the appetite, is good for them that are hydropical, have the Stone, and Gout, *&c.* It is a *Menſtruum* diſſolving metals, excelling all other therein: For it diſſolveth all metals and minerals, (excepting ſilver) and almoſt all ſtones, (being rightly prepared) and reduceth them into excellent medicaments.

The clear Oyl of Maſtick, and Frankincenſe.

Take of Frankincenſe, or Maſtick, powdered ſmall, as much as will ſerve to fill the third part of a cornute; (which muſt be coated) upon which pour a ſufficient quantity of the ſpirit of Salt, taking heed that the Retort be not filled too full, or elſe the ſpirit when it boyls, flows over it, then place it in Sand, and give fire by degrees, and there will firſt come out ſome phlegm, after which a clear tranſparent Oyl, together with the ſpirit of Salt, which muſt be kept by it ſelf, after this a certain yellow Oyl, which muſt be received by it ſelf: and laſt of all, there follows a red Oyl, which although it is not to be caſt away, yet it is very unlike to the firſt, ſerving for outward uſes, and to be mixed

with Oyntments and Emplaſters; for it doth wonderfully conſolidate, and therefore good in new and old wounds. The firſt being well rectified is in its ſubtilty, and penetrating faculty; not unlike to ſpirit of Wine, and may profitably be uſed inwardly, and outwardly, *viz.* in cold affects, but eſpecially in the ſtiffneſs of the Nerves cauſed by cold humors, upon which follows a contraction; but then you muſt firſt rub the member contracted with a linnen cloth, that it may be well warmed, into which then the Oyl muſt be chafed with a warm hand: For it doth do wonders in ſuch like affects of the Nerves.

After the ſame manner may Oyls be made out of all Gums. The red, tenacious, and ſtinking Oyls of Tartar, Hartſhorn, Amber, *&c.* diſtilled after the common way by Retort are alſo rectified with ſpirit of Salt, ſo as to become tranſparent, and to loſe the *Empyreuma* contracted by diſtillation.

Ros Vitriol *is made thus.*

Take of the beſt Danſick-Vitriol, as much as you pleaſe, uncalcined; put it into a Glaſs-gourd, and diſtil it in Sand, and there will come over a water ſomewhat ſharpiſh.

This Water or *Ros* is of greater uſe then the Spirit or Oyl thereof.

It helpeth all inward inflammations, as of the Liver, Kidneys, Stomach, helps the ebullition of bloud, and all diſtempers that come from thence.

This is that phlegm, which moſt vapour away, but it is becauſe they know not the vertues thereof.

A ſweet green Oyl of Vitriol is made thus.

Take as many Copporas ſtones as you pleaſe, beat them ſmall, and lay them in a cool Cellar, and in twenty or thirty days they will attract the air, and look black, and after fourteen days become whitiſh, and ſweetiſh; then diſſolve them in diſtilled rain-water; then filter and evaporate the water, and they will ſhoot into green Cryſtals, which you may diſſolve in a cellar *per deli-*

deliquium, being firſt beaten ſmall, and laid on a Marble-ſtone.

This Liquor is that famous medicine of *Paracelſus* for the Falling-ſickneſs, a few drops thereof being taken in any appropriated liquor.

Take heed that it come at no ſtrong fire, for then ſaith *Paracelſus*, it loſeth its greenneſs, and as much as it loſeth of that, ſo much alſo of its vertue.

A Spirit may be drawn from hence by an ingenuous Artiſt, that will ſmell like Musk, or Amber.

The Sulphur of Vitriol may with Spirit of Wine be extracted thus.

Take of the beſt Danſick-Vitriol half a pound, dry it by a gentle fire till it be whitiſh, then pour on it of the beſt rectified Spirit of Wine thirty ounces, (Note, that there muſt come to it no other moiſture than the Spirit of Wine, the Glaſs alſo muſt be very dry, elſe you labour in vain) then digeſt it in Horſe-dung, the ſpace of a month; then decant from the feces the Spirit of Wine without any troubling of it, then in *Balneo*, evaporate the Spirit, and at the bottom you will have a yellow liquor of a moſt wonderful ſtipticity.

This liquor is a famous Anodynum, ſuppreſſing all noxious vapours whatſoever, and cauſing reſt.

A few drops thereof may be taken in any ſpecifical liquor.

A Sudorifical Water to be uſed outwardly.

Take of ſublimed Mercury very finely powdered an ounce and half, of Euphorbium powdered a ſcruple, Spirit of Wine well rectified, and Roſe-water, of each a pound; digeſt them them two or three hours in a gentle *Balneo*, the neck of the veſſel which muſt be very long, being well ſtopt; then let them boil a quarter of an hour: when the liquor is cold, pour it from the feces, and keep it in a Glaſs.

If the Back-bone be bathed with this Water, or the wriſt of thoſe that be weak, it cauſeth ſweat preſently, if it be done in the bed. By which means diſeaſes that require ſweat may be cured. Alſo any pained place by be-

ing bathed with this Water is in a little time eased.

Note, that you must not bath any place above three or four times with it, for by being too often used, it contracts the skin.

How an acid Spirit, or Vinegar, may be distilled out of all Vegetables, as Herbs, Woods, Roots, Seeds, &c.

First put a few living coals into the Furnace, then put upon them wood that is to be distilled, that it may be burnt: out of which whilest it is burning goes forth the acid Spirit thereof into the Receiver, where being condensed, it falls down into another Receiver, resembling almost common Vinegar in its smell, wherefore also it is called the *Vinegar of Woods.*

And after this manner you may draw forth an acid spirit out of any wood, or vegetable, and that in a great quantity without costs, because the wood to be distilled is put but upon a very few living coals, and upon that another, for one kindles the other; and this spirit requires no more charges then of the wood to be distilled; which is a great difference betwixt this, and the common way of distilling, where besides Retorts, is required another fire; and out of a great Retort scarce a pound of Spirit is drawn in the space of five or six hours; whereas in ours, in the space of one day, and that without any cost or labour may be extracted twenty or thirty pounds, because the wood is immediately to be cast into the fire to be distilled, and that not in pieces, but whole: Now this spirit (being rectified) may commodiously be used in divers Chymical operations, for it doth easily dissolve animal stones, as the eyes of Crabs, the stones of Perches, and Carps, Corals also and Pearl, *&c.* as doth Vinegar of Wine. By means thereof also are dissolved the Glasses of Metals, as of Tin, Lead, Antimony; and are extracted, and reduced into sweet Oyls.

The Spirits, Flowers, and Salts of Minerals and Stones.

By this way Spirits may be raised from any Mineral or Stone, and that without the addition of any other thing: yet so, as that the

the Minerals, as Stones, as Flints, Cryſtal, Talk, *Lapis-Calaminaris*, Marcaſite, Antimony, being ground with an Iron-ladle caſt upon the coals, and there will ariſe together with a certain acid Spirit, ſome Salt and Flowers, which are to be waſhed off from the Recipients, and filtred, and the flowers will remain in *Charta bibula*, for the water together with the Spirit, and the Salt paſſeth through the filter, all which may be ſeparated, rectified and be kept by themſelves for their proper uſes. Now this you muſt know, that you muſt chooſe ſuch Minerals which have not been touched by the fire, if you deſire to have their ſpirit.

How to rectifie Oils and Spirits of Minerals.

Put the Liquor that is diſtilled from Minerals into the Retort, to which give fire by degrees, and the Spirit will riſe up into the uppet Receiver, and the heay Oyl will go into the middle Receiver, which is the bigeſt of all; and into the little Receiver annexed to the end of the middle, will paſs ſome of the Spirit, which though it paſſeth into the middle Receiver, will not ſtay there, but goeth beyond it becauſe it finds vent.

Of

Of ANIMALS.

BOOK IV.

Waters, Spirits, and Oyls, simple and compound out of Animals.

Oyl and Water out of Bloud, is made thus.

TAke of bloud as much as you please, let it stand in putrefaction in a Glass-vessel close covered the space of forty dayes, then distil it in ashes, and there will come forth a Water and Oyl: extract the Salt out of the feces with the said water, calcine the Salt in a Crucible, and then dissolve it in the said water, and then distil off the water (which will be a good rectifying of the Water) and dry the Salt very well, which then mixed with the foresaid Oyl, being first rectified, and digest them both together for the space of a month.

To make the Magistery of Bloud.

Take of the purest Bloud as much as you please, put it into a Pellican, that three parts of four may be empty, and digest it a month

month in Horſe-dung (in which time it will ſwell and become as much more as it was when it was put in) then diſtil off the flegm in *Balneo*, and in the bottom will remain the Magiſtery of Bloud, which muſt be diſtilled, and cohobated nine times in a Retort in aſhes, and then it is perfected.

This Magiſtery is of excellent vertue, which being taken inwardly, and applyed outwardly, cureth moſt diſeaſes, and eaſeth pain, being very Balſamical.

Elixir of Mummie is made thus.

Take of Mummie (*viz.* of Mans-fleſh hardened) cut ſmall four ounces, Spirit of Wine terebinthinated ten ounces, put them into a glazed veſſel, (three parts of four being empty) which ſet in Horſe-dung to digeſt for the ſpace of a month; then take it out and expreſs it, let the expreſſion be circulated a month, then let it run through *Manica Hippocratis*; then evaporate the Spirit, till that which remains in the bottom be like an Oyl, which is the true Elixir of Mummie.

This Elixir is wonderful preſervative againſt all Infections, alſo very Balſamical.

The Eſſence of Mans-brains.

Take the Brains of a young man that hath dyed a violent death, together with the Membranes, Arteries, Veins, Nerves, and all the pith of the Back; bruiſe theſe in a Stone-mortar till they become a kind of pap, then put as much of the Spirit of Wine, as will cover it three or four fingers breadth: then put it into a large Glaſs, that three parts of four be empty, being Hermetically cloſed, then digeſt it half a year in Horſe-dung, then take it out and diſtil it in *Balneo*, and cohobate the water till the greateſt part of the Brains be diſtilled off.

A ſcruple or two of this Eſſence taken in ſome ſpecifical water once in a day is a moſt infallible medicine againſt the Falling-ſickneſs.

A Famous Spirit made out of Cranium-humanum.

Take of *Cranium-humanum* as much as you pleaſe, break it into ſmall pieces, which put into a Glaſs-Retort well coated, with a large Receiver well luted, then put a ſtrong fire to it by degrees, continuing of it till you ſee no more fumes come forth; and you ſhall have a yellowiſh Spirit, a red Oyl, and a volatile Salt.

Take this Salt and the yellow Spirit, and digeſt them by circulation two or three months in *Balneo*, and thou ſhalt have a moſt excellent Spirit.

This Spirit is of affinity with, if not the ſame as that famous Spirit of Dr. *Goddard's* in *Holborn*.

It helps the Falling-ſickneſs, Gout, Dropſie, infirm Stomach; and indeed ſtrengthens all weak parts, and openeth all obſtructions, and is a kind of Panacæa.

Another excellent Spirit made out of Cranium, *Harts-horn, or Ivory.*

Take of either of theſe, (if you take *Cranium*, it need not be bruiſed at all, only broke into little pieces; if Harts-horn or Ivory, you muſt cut them in thin pieces) lay it piece by piece upon a net ſpread upon any veſſel, being almoſt full of water, cover this net with another veſſel very cloſe, then make the water boil, and keep it boiling three days and three nights, and in that time the Bones, or Horns, will be as ſoft as Cheeſe; then pound them, and to every pound thereof, put half a pound of Hungarian Vitriol uncalcined, and as much Spirit of Wine as will make them into a thin paſte. This Paſte digeſt in a veſſel Hermetical ſeal'd the ſpace of a moneth in *Balneo*, then diſtil it in a Retort in Sand till all be dry, and you ſhall have a moſt excellent Spirit.

This Spirit is of wonderful uſe in the Epilepſie-Convulſions, all Feavers putrid or peſtilential, paſſions of the heart, and is a very excellent Sudorifick.

This Spirit may be taken from the quantity of half an ounce to an ounce in ſome ſpecifical liquor.

A Wa-

A Water and Oyl made out of Hair.

Fill an earthen Retort with Hair cut ſmall, ſet it over the fire, and fit a Receiver to it, and there will come over a very ſtinking Water and Oyl.

This Water and Oyl is uſed in *Germany* to be ſprinkled upon fences and hedges, to keep wild and hurtful Cattle from coming to do harm in any place; for ſuch is the ſtink of this liquor, that it doth affright them from coming to any place near it.

Water of Milk is made thus.

Take of what Milk thou pleaſeſt a Gallon, in it diſſolve half a pound of Salt, and put to it two handful of Plantain, and an ounce of Licoriſh ſliced, then diſtil it in a hot Still with a gentle fire.

This water is of excellent uſe in hot diſtempers of the Lungs and Kidneys.

You may put in other ingredients, according to the uſe you would have it for.

An excellent compound water of Milk for any Inflamations in the eyes.

Take of Womans-milk a pint, of white Copperas a pound, diſtil them in aſhes. Note, that aſſoon as thou perceiveſt any ſharp to come off, then ceaſe.

Let inflamed eyes be waſhed three or four times in a day with this water, and it helpeth them wonderfully.

Spirit of Urine is made thus.

Take of the Urine of a yonng man drinking much Wine, as much as you pleaſe, let it ſtand in Glaſs-veſſels in putrefaction 40. days, then pouring it from its feces, diſtil it in a Glaſs-gourd in Sand, till all be dry; then cohobate the ſaid Spirit on the *Caput-Mortuum* three times; then diſtil it in a Gourd of a long

neck, and there will ascend, besides the Spirit, a Crystalline Salt, which thou maist either keep by it self, being called the Volatile Salt of Urine, or mix it with its Spirit which will thereby become very penetrating, if they be digested for some days together.

Note, that the pipe of the head must be wide, or else the Volatile Salt will soon stop it.

Note, that this Salt is so penetrating, that it penetrateth the body of the Glass.

This Spirit by rectification may be made so pure, and subtle, that it will burn as fire, and dissolve Gold, and precious Stones.

This being often applyed to any place pained with the Gout, easeth it presently; it also quickens any part that is benummed.

The Salt Volatile is *Helmont's* famous medicine for the Jaundice.

A compound Spirit of Urine.

Take of Hungarian Vitriol a pound, the Urine of a Boy that is healthy, four pints: put these into a Glass-vessel well closed, that three parts of four may be empty; digest them in *Balneo* for the space of a month, then distil them in ashes till all be dry.

This Spirit is of great vertue in the Epilepsie, Gout, Dropsie, Convulsions, being taken from two drams to half an ounce in some specifical liquor.

To make a Spirit of Honey.

Take good strong stale Mead, otherwise called Metheglin, as much as thou pleasest, distil it in a Copper Still, or Alembick, with its Refrigeratory, and it will yield a Spirit like *Aqua-vitæ*.

The Quintessence of Honey is made thus.

Take of the purest Honey two pound, of Fountain-water one pound; boyl these together till the water be boyled away, taking off all the scum that riseth, then take the Honey and put it

it into a Glass, four parts of the five being empty, close it well, and set it in digestion a whole year, and thou shalt have the Essence of Honey swimming on the top, in the form of an Oyl, being of as fragrant a smell as any thing in the world; the phlegm will be in the middle, and the feculent matter in the bottom, of a dark colour, and stinking smell.

Some make the Quintessence of Honey after this manner.

Take as much Honey as thou pleasest, of the best, put it into a Gourd of Glass; first distil off the phlegm in *Balneo*, then extract the tincture out from what remains, with the said Water, then calcine the remaining feces, and extract from thence the Salt with the foresaid Water, being distilled off from the Tincture; calcine the Salt, and melt it in a Crucible, thenlet it dissolve in a Cellar; then again evaporate it away, and thou shalt have a most white Salt, which let imbibe as much of the Tincture as it will; digest them for three months, and thou shalt have an Essence of Honey.

An Essence of Honey may be made thus.

Take of Honey well despumated as much as you please, pour upon it as much of the best rectified Spirit of Wine as will cover it five or six fingers breadth; digest them in a Glass-vessel well closed (the fourth part only being full) in a temperate *Balneo*, the space of a fort-night, or till the Spirit be very well tinged, then decant off the Spirit, and put on more till all the tincture be extracted; then put all these tinctures together, and evaporate the Spirit till what remains begin to be thickish at the bottom, and of a golden colour.

This is a very excellent Essence of Honey, and is of so pleasant an odour, that scarce any thing is like to it.

It is so cordial, that it even revives the dying, if two or three drops thereof be taken in some Cordial Water.

A most strong Spirit of the Vinegar of Honey.

Take a pound of Honey, put to it of the best White-wine-

vinegar ſix pints, an ounce of white Pepper bruiſed ſmall, of the ſtrongeſt Muſtard-ſeed bruiſed three ounces; put theſe into a Glaſs-veſſel, that three parts of four may be empty; digeſt them in a temperate *Balneo*, or ſet the Veſſel in the Sun for the ſpace of a fortnight, then diſtil them in *Balneo*, and thou ſhalt have a Spirit far ſharper than the common Spirit of Vinegar.

This Spirit is ſtronger, and better than any common diſtilled Vinegar for the diſſolving of hard things, and extracting the tinctures out of things.

Oyl, or Quinteſſence of Wax.

Take of the beſt Wax a pound, as much of pure Sand well waſhed from all its impurity, and again dryed; Firſt melt the Wax, and then mix the Sand with it very exactly; then put them into a Glaſs-Retort well coated, fit a ſtrong Receiver to it, and ſet it in Sand, give it fire by degrees, continuing it four dayes, which at laſt muſt be very ſtrong, and there will come off a ſpirituous Oyl, which muſt be rectified, ſeven times in a Glaſs-Retort, every time changing the Retort, and you ſhall have a ſubtle Oil of a golden colour.

This Oyl extracts the vertues out of all Flowers preſently, being ſet in the Sun, it is wonderful Balſamical for the cure of wounds or ulcers, both inward, and outward; it alſo being applyed outwardly, eaſeth all pains, quickens any dead member, as in the Palſie.

Water is made out of any fleſh thus.

Take what fleſh you pleaſe, the bloudieſt part thereof, unwaſhed, being cut very ſmall, and then bruiſed (or if it be a feathered fowl, take it being chaſed up and down, until it be wearied, and then ſuddenly ſtrangled, the feathers being plucked off without putting of it into water, and being thus plucked bare, and the bowels taken out, cut the fleſh; bones, gizard, liver, heart,) and pour upon it as much water as will be ſufficient, with what ſpices and herbs thou pleaſeſt, then ſet it over a gentle fire in an earthen veſſel glazed the ſpace of 24. hours, then put the head upon it and

and lute it cloſe, and there will diſtil off a comfortable reſtorative water.

Water, or Liquor, is made out of fleſh thus.

Take off what fleſh you pleaſe, or feathered fowl prepared as before, bruiſe it ſmall, and put it into a Copper veſſel tinned within ſide, without any water being put to it, put a cover to it, and lute it cloſe, and ſet it *Balneo*, or over the vapour of ſeething water, and if the fleſh be tender, it will be turned into a clear liquor the ſpace of twelve hours, if harder, it will require a longer time: You may put in what ſpices or hearbs you pleaſe, to give it a good reliſh and odour; after all is done, you may ſtrain it and keep it for uſe, being very reſtaurative and good for weak ſtomachs, that cannot concoct hard meat.

If this be digeſted in a Pellicans or Bolt-head a fortnight, it will be farr better.

After this manner may be preſerved Snails, Worms, *&c.* and ſuch like, which are very medicinable.

A very excellent Reſtorative Liquor.

Take of the heart, lungs, and liver of a Calf, the ſame part of a Fox new killed, cut them ſmall, put to them a quart of Shell-Snails well ſcoured in ſalt-water; let theſe be put into a Copper veſſel tinned within ſide, and covered cloſe, that no vapour come forth; ſet this veſſel over the vapour of ſeething-water, and in 24. hours, or thereabouts, they will be for the moſt part of them turned into a liquor of themſelves; then take out this liquor, and put it into a large Pellican, or Bolt-head, putting to them a quart of old Malligo-wine, Roſemary-flowers, Betony-flowers, Marygold-flowers, Marſh-mallow-flowers, of each a handful, half a pound of Raiſins of the Sun ſtoned, Mace and Nutmeg, of each two drams; digeſt all theſe together the ſpace of a fortnight, then pour off that which is clear from the feces, and ſweeten it with Sugar, or Syrup of Gilly-flowers, and let the Patient take thereof five or ſix ſpoonfuls, three or four times in a day.

This

This liquor recovereth the decaying ſtrength wonderfully; they that by reaſon of their weakneſs can neither eat, or digeſt any manner of common meat, will in a ſhort time be ſenſibly ſtrengthned, if they drink a quarter of a pint of this morning and evening.

It is very good in Conſumptions, and repairs the radical moiſture marvellouſly.

A Balſom made of Beart-fat.

Take of Bears-fat a pound, diſtil it in a Retort, and rectifie it three or four times: to this thus rectified, put the tincture of Roſemary and Sage, made with Spirit of Wine, of each three ounces, mix them well together; in theſe infuſe Cloves, Cinnamon, Saffron, Nutmegs, of each three drams, in warm aſhes the ſpace of a night, then ſtrain them, and put to the Oyl four ounces of the beſt Wax melted, and mingled well together.

This is a moſt incomparable Balſom for the Gout, and Palſie.

The Oyl of Snakes and Adders.

Take Snakes, or Adders, when they are fat, which will be in *June*, or *July*; cut off their heads, and take off their skins, and unbowel them, and put them into a Glaſs-gourd; and pour on ſo much of the pure Spirit of Wine well rectified, that it may cover them four or five fingers breadth, ſtop the glaſs well, and ſet it in *Balneo* till all their ſubſtance be turned into an Oyl, which keep well ſtopt for your uſe.

This Oyl doth wonderful cures in recovering hearing in thoſe that be deaf, if a few drops thereof be put warm into the Ears.

A Noble-man of *Germany*, that was famous for curing the deaf, uſed this as his chiefeſt medicine, by which they ſay he cured thoſe that were born deaf.

The Quinteſſence of Snakes, Adders, or Vipers.

Take of the biggeſt and fatteſt Snakes, Adders or Vipers, which

which you can get in *June*, or *July*, cut off their heads, take off their skins and unbowel them, then cut them into ſmall pieces, and put them into a Glaſs of a wide mouth, and ſet them in a warm *Balneo*, that they may be well dryed, which will be done in three or four days: then take them out, and put them into a Bolt-head, and pour on them of the beſt alcolizated Wine as much as will cover them ſix or eight fingers breadth. Stop the Glaſs Hermetically, and digeſt them fifteen days in *Balneo*, or ſo long till the Wine be ſufficiently covered, which pour forth; then pour on more of the foreſaid Spirit of Wine till all the Quinteſſence be extracted: Then put all the tinged Spirits together: and draw off the Spirit in a gentle *Balneo*, till it be thick at the bottom; on this pour Spirit of Wine cariophyllated, and ſtir them well together, and digeſt them in a Circulatory ten dayes, then abſtract the Spirit of Wine, and the quinteſſence remaineth at the bottom perfect.

This Quinteſſence is of extraordinary vertue for the purifying of the bloud, fleſh and skin, and conſequently of all diſeaſes therein. It cures alſo the Falling-ſickneſs, and ſtrengthens the Brain, Sight, and Hearing, and preſerveth from Gray-hairs, reneweth Youth, preſerveth Women from Abortion, cureth the Gout, Conſumption, cauſeth ſweat, is very good in, and againſt Peſtilential infections.

Viper-Wine is made thus.

Take the beſt fat Vipers, cut off their heads, take off their skins, and unbowel them, then put them into the beſt Canary-Sack, four or ſix, according to their bigneſs into a gallon: Let them ſtand two or three months, then draw off your Wine as you drink it.

Some put them alive into the Wine, and there ſuffocate them, and afterwards take them out, and cut off their heads, take off their skins, and unbowel them, and then put them into the ſaid Wine again, and do as before.

This Wine hath the ſame vertues as the fore-going Quinteſſence; it alſo provoketh to Venery, and cures the Leproſie, and ſuch like corruption of bloud.

Kunrath's *famous Water, called* Aqua-Magnanimitatis.

Take of Piſmires, or Ants, (the biggeſt that have a ſowriſh ſmell, are the beſt) two handfuls, Spirit of Wine a Gallon; digeſt them in a Glaſs-veſſel cloſe ſhut, the ſpace of a month, in which time they will be diſſolved into a Liquor; then diſtil them in *Balneo*, till all be dry: Then put the ſame quantity of Ants as before, digeſt, and diſtil them in the ſaid Liquor as before: do this three times, then aromatize the Spirit with ſome Cinnamon.

Note, that upon the Spirit will float an Oyl, which muſt be ſeparated.

This Spirit is of excellent uſe to ſtir up the Animal Spirit: in ſo much, that *John Caſmire* Palſgrave of the *Rhene*, and *Seyfrie* of *Collen*, General againſt the *Turks*, did alwayes drink of it when they went to fight, to increaſe Magnanimity and Courage, which it did even to admiration.

This Spirit doth alſo wonderfully irritate them that are ſlothful to Venery.

It alſo provoketh Urine even to admiration.

It doth alſo wonderfully irritate the Spirits that are dulled, and deaded with any cold diſtemper.

This Oyl doth the ſame effect; and indeed more powerfully.

This Oyl doth beſides what is ſpoken of the Spirit, help deafneſs exceedingly, two or three drops being dropped into the Ear, after it is well ſyringed, once in a day, for a week together.

It helpeth alſo the Eyes that have any film growing on them, being now and then dropped into them.

Another Aqua-Magnanimitatis *is made thus.*

Take of Ants, or Piſmires, a handful, of their Eggs two hundred of Millepedes, (*i.*) Woodlice one hundred, of Bees one hundred and fifty; digeſt all theſe in two pints of Spirit of Wine, being very well impregnated with the brighteſt Soot: Digeſt them toge-

together the ſpace of a month, then pour off the clear Spirit, and keep it ſafe.

This Water, or Spirit, is of the ſame vertue as the former.

Water of Dung is made thus.

Take of any dung as much as thou pleaſeſt, whilſt it is freſh, put it into a common cold Still, and with a ſoft fire diſtil it off; it will be beſt if the bottom of the Still be ſet over a vapour, if thou wouldſt have it be ſtronger, cohobate the ſaid water over its feces ſeveral times: for we ſee there is great vertue in dung, it makes ground fertil, and many ſorts thereof are very medicinable.

A Water of Doves-dung is made thus.

Take of Doves-dung dryed as much as you pleaſe, to every pound put a pint of Rheniſh-wine, in which let it ſteep all night in a gentle *Balneo*, then diſtil it in a Glaſs-gourd in aſhes: Cohobate this Liquor three times; if there be any Volatile Salt, mix it with water.

This Water is very excellent againſt all obſtructions of the Kidneys, Bladder; it helpeth the Jaundice preſently, two or three ſpoonfuls thereof being drank once every morning and evening.

A Water made of Horſe-dung.

Take of the dung of a Horſe, that is fed in the ſtable, as much as you pleaſe; let it ſtand two dayes out of the Sun, and out of the wet, to every pound of this pour a pint of White-wine, let them ſtand in a warm *Balneo* a fortnight; then diſtil them in a Glaſs-gourd in Sand, cohobate this three or four times; if there be any volatile Salt, mix it with the water.

This Water is very excellent againſt the Baſtard-pluriſie, Stitches, Wind, obſtruction of the Reins, Bladder, very good in a Dropſie, Jaundice, Scurvy, *&c.* If three or four ſpoonfuls be taken every morning in the Water of Juniper-berries, it alſo cauſeth ſweat.

A Water smelling like Amber made by Paracelsus *out of Cow-dung.*

Take of Cow-dung, and distil it in *Balneo*, and the water thereof will have the smell of Amber-griese.

This water is very excellent in all inward inflamations.

An excellent Sudorifick made of the young buds of Harts-horn.

Take of the young buds of Harts-horn, whilst they are full of bloud and moist; bruise them into a paste, then mix as much Canary-wine as will make a very thin paste, distil them in ashes till they be very dry.

This is an excellent Sudorifick in all burning Feavers and Epidemical diseases; if a spoonful be taken by it self, or in any appropriated Liquor.

Oyl out of Bones, and Horns, is made thus.

Take of what Bones you please, reduce them to a gross powder, put them into a Retort, putting a strong fire by degrees thereunto; and there will come forth an Oyl, and volatile Salt, both which thou mayst mix together, and digest them into an Essence, the Oyl being first rectified with Spirit of Wine.

The Water of Swallows against the Falling-sickness.

Take of Swallows, cut into pieces without separating any thing from them six ounces, of *Castoreum* cut small an ounce; mix them together, infuse them twelve hours in half a pint of Canary-wine, then put them into a Glass-gourd, and distil them in Sand till all be dry, then cohobate the Liquor three times.

This Water being drank to the quantity of two spoonfuls every morning, cureth them that have the Falling-sickness.

Oyl

Oyl out of Eggs is made thus.

Take of the yelks of Eggs boyled very hard, rub them in pieces with your fingers, then fry them in a pan over a gentle fire, continually ſtirring them with a ſpoon till they become red, and the Oyl be reſolved, and flow from them; then put them into a hair-cloth, and ſo preſs forth the Oyl.

This Oyl cleanſeth the skin from any filthineſs contracted by heat; It cureth Puſtules, Chaps, Excoriations, Ring-worms, but eſpecially all burnings.

A Water of the Whites of Eggs that will cure a Wound without any viſible Scar.

Take as many Eggs as you pleaſe, boyl them very hard, then cut them in the middle, and take out the yelks, filling up the cavities, with ſome of thoſe whites being firſt bruiſed into a paſte, then put both ſides of the Eggs together as before, and tye them together with a thred, and with a ſtring hang them in the middle of a Gourd-glaſs, that they touch not the ſides, ſtop this Glaſs very cloſe, and ſet it in *Balneo*, and you ſhall ſee thoſe whites which were bruiſed drop down into a Liquor: which you muſt gather up out of the bottom of the Glaſs, and keep.

You will have very little of this Liquor.

This Liquor applyed to any green wound with a feather, cures it preſently, whereſoever it be, without any viſible ſcar. It cures moſt wonderfully all wounds in the Eyes.

A Water of Crabs is made thus.

Take Crabs, or Craw-fiſh, as many as you pleaſe, break them to pieces, then macerate them in water of Sengreen for the ſpace of a day, then diſtil them, cohobate the water three times.

This Water is of ſingular vertue in all manner of inflamations inward and outward.

An Oyl, or Liquor, is made out of Crabs-eyes thus.

Take of Crabs-eyes, very finely powdered, five parts, Oyl of Tartar *per Deliquium* ſix parts: (This Oyl of Tartar muſt be made of Salt of Tartar after it hath flowed in the fire;) digeſt them in Horſe-dung the ſpace of a month, then coagulate the Liquor, and make an extraction with the beſt rectified Spirit of Wine that can be made, (or elſe you loſe your labour) then evaporate the Spirit of Wine, and there remains an Oyl at the bottom.

This Oyl is of wonderful vertue in putrid Feavers, and ſuch like diſtempers, alſo in all obſtructions eſpecially of the Kidneys.

Water of Spawn of Frogs is made thus.

Take of the Spawn of Frogs gathered in *March*, as much as you pleaſe, put a handful of Salt to every quart, and put them into a common cold Still, and with a gentle fire diſtil off the Water till no more will diſtil.

A compound Water of the Sperm of Frogs.

Take of the Sperm of Frogs gathered in *March*, about the new of the Moon four pound, of Cow-dung freſh ſix pound; mix them well together, and let them ſtand the ſpace of a day, then diſtil them in aſhes.

This Water allayes all hot pains both inward, and outward, eſpecially of the Gout.

Another compound Water of the Sperm of Frogs.

Take of the Sperm of Frogs gathered in *March*, two pound and half, the Urine of a young man three pints, new Treacle two ounces and a half, white Vitriol, Salt, Allum, of each four ounces, then diſtil them, and put to the Water an ounce and half of the Salt of Vitriol, Camphire, and Saffron, of each an ounce.

This Water being applyed outwardly, helpeth all pains, eſpecially of the Gout, and ſuch like, alſo allayeth hot or cold ſwellings; It alſo ſtancheth bleeding.

A Miſ-

A Miſcellany of Spagirical Experiments, and Curioſities.

BOOK V.

The Spagyrical Anatomie of Water.

WAter ſeems to be a body ſo very Homogeneal, as if neither Nature or Art could diſcover any Heterogeneity in the parts thereof: Thus indeed it ſeems to the eye of the Vulgar, but to that of a Philoſopher far otherwiſe, as I ſhall endeavour to make credible, by preſenting to your conſideration a twofold proceſs of the diſcovering the diſſimilary parts thereof; whereof the one is natural only, and the other artificial: But before I ſpeak of either, it muſt be premiſed, that in the element of Water there is great plenty of the Spirit of the World, which is more predominant in it, than in any other element, for the uſe, and benefit of univerſal Nature; and that this Spirit hath three diſtinct ſubſtances, *viz.* Salt, Sulphur, and Mercury. Now by Salt, we muſt underſtand a ſubſtance very dry, vital, and radical, having in it the beginning of corporification, as I may ſo call it: by Sulphur, a ſubſtance, full of light, and vital heat,

heat, or vivifying fire, containing in it ſelf the beginning of motion, by Mercury, a ſubſtance abounding with radical moiſture, with which the Sulphur of life, or vital fire is cheriſhed, and preſerved. Now theſe ſubſtances which are in the Spirit of the World, make all Fountains, and Waters, but with ſome difference, according to the predominancy of either. This ſeveral predominancy therefore is ground of the variety of productions; I ſay, of productions, becauſe all things are produced out of water: for Water is both the Sperm, and the *Menſtruum* of the World; the former, becauſe it includes the ſeed of every thing; the latter, becauſe the Sperm of Nature is putrefied in it, that the ſeed included in it ſhould be actuated, and take upon it the divers forms of things; and becauſe, by it the ſeed it ſelf, and all things produced of ſeed grow, and are increaſed: Now this being premiſed, I ſhall ſhew you what the natural proceſs is, which I ſhall make plain by inſtancing in three ſeveral productions, *viz.* of the ſpawn of Frogs, of Stones, and of Vegetables.

The ſpawn of Frogs is produced after this manner; *viz.* The Sulphur, which is in the Water, being by the heat of the Sun reſolved, and diſſolved, is greedily, and with delight conceived by the element of water, even as the ſperm of a Male is by the matrix of the Female, and that upon this account. The water wants ſiccity, which the ſulphur hath, and therefore exceedingly deſiring it, doth greedily attract it to it ſelf: Sulphur alſo wants humidity, and therefore attracts the humidity of the water: Moreover the humidity of the water hath the humidity of the ſalt laid up occultly in it: alſo the Sulphur cheriſheth the ſiccity of the fire, and deſires nothing more than the humidity of the Salt, that is in the water. Sulphur alſo contains the ſiccity of the Salt, whence it is that Salt requires a ſiccity from the Sulphur. And thus do theſe attractive vertues mutually act upon each others ſubject. Now by this means there is a conception made in the water, which now begins to be turgid, puffed up, and troubled, as alſo to be groſſer, and more ſlimie, until out of the ſpermatick veſſels the ſperms be caſt upward, in which ſperms after a while appear black ſpecks, which are the ſeed of the Frogs, and by the heat of the Sun, are in a ſhort time turned into

into the ſame; by which it appears there are diſſimilary parts in water.

2. Stones are produced out of water that hath a mucilaginous Mercury, which the Salt, with which it alſo abounds, fixeth into ſtones: This you may ſee cleared by putting ſtones into water, for they will after a time contract a mucilaginous ſlimie matter, which being taken out of the water, and ſet in the Sun, becomes to be of a ſtony nature. And whence come thoſe ſtones, gravel, and ſand, which we ſee in ſprings? They are not waſhed down out of the mountains and hills (as ſome think) from whence the waters ſpring, neither were they in the earth before the ſprings brake forth (as ſome imagine) and now appear by waſhing away of the earth from them; for if you dig round about the ſprings, even beyond the heads of them, you ſhall find no ſtones at all in the earth, only in the veins thereof through which the water runs: Now the reaſon of the ſmalneſs of theſe ſtones is the continual motion of water, which hinders them from being united into a continued bigneſs. I ſhall make a further confirmation of this in the artificial proceſs of manifeſting the heterogeneity of water. I ſhall here only add the aſſertion of *Helmont*, ſaying, that with his Alcaheſt all ſtones, and indeed, all things may be turned into water: If ſo, then you know what the Maxim is, *viz.* All things may be reſolved into that from whence they had their beginning.

3. Vegetables are produced out of water, as you may clearly ſee by the waters ſending forth plants that have no roots fixed in the bottom; of which ſort is the herb called Duck-weed, which putteth forth a little ſtring into the water, which is as it were the root thereof. For the confirmation of this, that this herb may be produced out of meer water, there is a Gentleman at this time in the City, of no ſmall worth, that ſaith he had fair water ſtanding in Glaſs divers years, and at laſt a plant ſprang out of it. Alſo if you put ſome plants, as Water-mint, *&c.* into a Glaſs of fair water, it will germinate, and ſhoot out into a great length, and alſo take root in the water, which root will in a ſhort time be ſo increaſed, and extended, as to fill up the Glaſs: but you muſt remember, that you put freſh water into the Glaſs once in two or three days. Hereunto alſo, may be added the experiment

of *Helmont*, concerning the growth of a tree; For (ſaith he) I took two hundred pound weight of earth dryed in an oven, and put it into a veſſel, in which I ſet a Willow-tree which weighed five pound, which by the addition of water to the earth, did in five years time grow to ſuch a bigneſs, as that it weighed 169. pound; at which time I alſo dryed and weighed the earth, and within two ounces it retained its former weight. Beſides, the Ancients have obſerved, that ſome hearbs have grown out of ſnow, being putrified: and do not we ſee that all Vegetables are nouriſhed, and increaſed with an inſiped water, for what elſe is their juyce? If you cut a Vine in the month of *March*, it will drop divers gallons of inſipid water, which water, if it had remained in the trunk of the Vine, would in a little time have been digeſted into Leaves, Stalks, and Grapes, which Grapes alſo by a further maturation would have yielded a Wine, out of which you might have extracted a burning Spirit: Now I ſay, although this inſiped water be by the ſpecifical Sulphur and Salt of the Vine, fixed into the Stalks, Leaves, and Grapes of the Vine, yet theſe give it not a corporificative matter, for that it had before, and an aptitude and potentiality to become what afterwards it proves to be: for indeed, Stalks, Leaves, and Grapes, were potentially in it before, all which now it becomes to be actually, by vertue of the Sun, and of the aforeſaid Sulphur and Salt, whereof the two latter were originally in the ſmall ſeed; and therefore as I ſaid, could not add any bulk to them.

Moreover, Do not we ſee, that when things are burnt and putrefied, they aſcend up into air by way of vapour, and fume, and then deſcend by way of inſipid dew, or rain? Now what do all theſe ſignifie, but that from water, are all things produced, and in it are diſſimilary parts?

2. The artificial proceſs is this: Take of what water you pleaſe, whether Well-water, Fountain, River, or Rain-water, as much as you pleaſe; let it ſettle three or four hours, until the ſlime thereof ſeparates it ſelf: then digeſt it the ſpace of a month; after which time evaporate the fourth part, by a very gentle heat, and caſt it away, being but the phlegm; then diſtil off the remainder of the water, till the feces only be left, which feces will

will be a ſlimie ſaltiſh ſubſtance: This middle ſubſtance diſtil again as before, caſting away every time the fourth part, as phlegm, and keeping the feces by themſelves for further uſe; and this do ſeven times. Note, that after the fourth or fifth diſtillation, the water will diſtil over like Milk, colouring the head of your Still, ſo that it can hardly be waſhed or ſcoured off. This pure water after the ſeventh diſtillation will leave no feces behind: and if you digeſt it three months, it will be coagulated into Stones and Cryſtals, which ſome magnifie very much for the cure of inward, and outward putrefactions; out of which alſo may be made a diſſolving Spirit. Note, that as this water ſtands in digeſtion, you may ſee divers curious colours. Now as for the feces, which I ſpake of, (which indeed, all waters, even the ſweeteſt leave at the bottom) being as I ſaid, a ſaltiſh ſlime, and in taſt, as it were, a *medium* betwixt Salt, and Nitre; take them, and diſtil them in a Retort in Sand, and there will firſt come forth a white fume, which being condenſed deſcendeth in a ſtraight line to the bottom, next will come over a red Oyl of great efficacy, exceeding the vertues of the Spirit of Salt, or Nitre. For confirmation of part of this proceſs, take May-dew gathered in a morning, (when it hath not rained the night before) and put it into a Glaſs-veſſel, covered with a Parchment pricked full of holes, and ſet it in the heat of the Sun for the ſpace of four months, and there will ſtore of green feces fall to the bottom, the reſidue of the water being white and clear. Now by all this, you may conclude, what manner of diſſimilarity there is in the parts of water. I ſhall add but one obſervation more, and ſo conclude this ſubject.

Take a flint of River-water, and put it into a Gourd-glaſs, pour upon it as much River-water as will fill the Glaſs, evaporate this water till the flint be dry, then pour on more freſh water; do this ſo long till the flint will fill up the Glaſs, (for in a little time it will fill it up, and become to be of the form or figure of the Glaſs) for it attracts to it ſelf the mucilaginouſneſs of the water, which indeed, is a ſlimie ſaltiſh matter, and the true matter of Stones. And thus thou ſhalt have that done by Art in few days, which Nature would have been perfecting many years; and indeed, juſt ſuch a Flint as is produced in the Rivers. Any one that

should see this Flint in the Glass, would wonder how it should come in there. You may break your Glass, and take out your Flint.

There are divers such processes which may be used, but in effect, they demonstrate but little more concerning the potential heterogeneity of water; and therefore to avoid tediousness, I shall here end with the Anatomy of water, concerning which, if any one can make a further illustration, let him be candid and impart it, and I shall be glad to learn of him, and in the mean time, let him accept of these my endeavours.

The Spagyrical Anatomy of Wine.

I shall not speak here of the juyce of Grapes, as being naturally divided into Wine, Tartar, and Lees; but of Wine as artificially divided into pure Spirit, Phlegm, and Feces.

1. The Spirit is that hot, subtle, pure, clear, cordial, and balsamical substance which ariseth with a small heat after four or five distillations, being indeed, but the twentieth part of the Wine. This Spirit is not that inebriating substance of the Wine, as most think; for a man may drink the Spirit that is extracted out of ten pints of Wine, without distempering of his brain at all, when as perhaps, he would be distempered with drinking a pint or two of the Wine.

Now this Spirit contains in it a subtle Armoniack, and essential Sulphur inseparably conjoyned, which indeed, are the life of the Spirit; and may be separated from the Mercurial, or watery part thereof, which after separation of them, remains insipid, but yet of wonderful subtilty. They may be separated thus: First, rectifie the Spirit as high as you can the ordinary way; then rectifie it once or twice in these following vessels.

Note,

Note, that if there be any flegm remaining in the Spirit, it will go no further then the middle Receiver, eſpecially the ſecond time. By this means thou ſhalt have ſo ſubtle a Spirit, that unleſs it be kept in a veſſel cloſe ſtopt it will flie away in the air. Then take of this Spirit two ounces, and pour it upon ſix ounces of calcined Tartar, before the ſalt be extracted, and mingle them well together; then diſtil it in *Balneo*, and there will come over an inſipid water, which, as I ſaid before, is

very subtle, then put on a like quantity of the said Spirit as before, and distil it off, and thus do so long till the water that comes over, is not insipid, but the Spirit comes over again hot as it was poured on: for by this time the fixed matter is gluted with the salt Armoniack, and sulphur of the Spirit. Then put this dryed matter into a glass sublimatory, and put fire to it, and there will sublime a salt from thence, even as Camphire is sublimed. This salt is the true essence of Wine indeed, and its vertues are wonderful, for there is no disease, whether inward or outward, that can withstand it. This is that essence of Wine of the Philosophers, which is so penetrating, a wonderful cordial, and balsamical, which if thou dost once obtain, thou shalt need but few other medicines.

Now this Spirit or *Aqua-vitæ* is in all Vegetables, as you may see in Malt, and Vegetables that are putrefied before they be distilled, which then yield a burning Spirit; yet it is in Wine more than in any other Liquors; I say Liquors, for if you take eight gallons of Sack, and as much Wheat, which is a solid body, the Wheat being malted will yield more *Aqua-vitæ* than the Sack.

2. The flegm is that which remains after the Spirit is distilled off, and is a putrid, insipid, cold, narcotick, and inebriating Liquor, debilitating the stomach, and offending the head. A few spoonfuls of this will presently make a man drunk, nay the flegm of half a pint of Wine will make a man drunk, when as two pints of Wine it self would hardly do it: whence you may collect what a great corrector of Malignant Spirits, and vapours the Spirit of Wine is; which, whilest it is mixed with the flegm before distillation doth temper and correct this inebriating quality thereof, and as it doth thus, so also being given (I mean the pure dephlegmated Spirit) to them that are already inebriated, doth much allay their distemper. This flegme therefore being of so narcotick a quality is the cause of Palsies, and such like distempers.

Moreover, it is to be observed that when this flegme is distilled off, there remains at the bottom a viscous corrosive matter which, by reason of its viscosity is the cause of obstructions, and by reason of its corrosiveness the cause of the gout, colick, stone, &c.

3. This

3. This feces being distilled, yields a sharp Spirit, and fetid Oyl, which leave behind them a saltish substance, out of which, when the Salt is extracted, there remains an insipid Earth.

Now, if any shall object against what I have asserted, and say, that *Aqua-vitæ*, or Spiris of Wine, are inebriating, the causes of Palsie, Gout, Stone, Colick, weak Stomachs, and such like, as we see by daily experience in those that are given to the drinking of these Liquors: to which I answer, It is true: but then I must distinguish of *Aqua-vitæ*, and Spirit of Wine; for there is a common *Aqua-vitæ*, and Spirit of Wine, of which also they make Aniseed-water, by putting a few Aniseeds thereunto, and other such like Waters, as Clove, Angelica, Lemmon, *&c.* With which this Nation is most abominably cheated, and their health impaired. But these are not rectified throughly, and three parts of four of them are insipid Narcotick phlegm, containing in it the feces I spake of, all which, I can in a day separate from the true pure Spirit, which Spirit rather prevents, than causes such distempers: And the truth is, all the goodness of the Wine is from this pure Spirit.

The famous Arcanum, *or Restorative Medicament of* Paracelsus, *called his* Homunculus.

First, we must understand, that there are three acceptions of the word *Homunculus* in *Paracelsus*, which are these:

1. *Homunculus* is a superstitious Image made in the place, or name of any one, that it may contain an astral and invisible man; wherefore it was made for a superstitious use.

2. *Homunculus* is taken for an artificial man, made of *Sperma humanum Masculinum*, digested into the shape of a man, and then nourished and increased with the essence of mans blood; and this is not repugnant to the possibility of Nature, and Art. But is one of the greatest wonders of God which he ever did suffer mortal man to know. I shall not here set down the full process, because I think it unfit to be done, at least to be divulged: besides, neither this, nor the former, is for my present purpose.

3. *Ho-*

3. *Homunculus* is taken for an excellent *Arcanum*, or Medicament, extracted by the ſpagyrical Art, from the chiefeſt ſtaffe of the natural life in man, and according to this acception, I ſhall here ſpeak of it: But before I ſhew you the proceſs, I ſhall give you an account why this Medicament is called *Homunculus*; and it is this.

No wiſe man will deny, that the ſtaffe of life is the nutriment thereof; and that the chiefeſt nutriment is Bread and Wine, being ordained by God, and Nature, above all other things, for the ſuſtentation thereof. Beſides, *Paracelſus* preferred this nutriment for the generation of the bloud and ſpirits, and the forming thence the Sperm of his *Homunculus*. Now by a ſutable alluſion the nutriment is taken for the life of man, and eſpecially becauſe it is tranſmuted into life: And again, the life is taken for the man; for unleſs a man be alive, he is not a man, but the carkaſs only of a man, and the baſeſt part thereof, which cannot perfectly be taken for the whole man, as the nobleſt part may. In as much therefore as the nutriment, or aliment of life, may be called the life of man, and the life of man be called man; this nutriment extracted out of Bread, and Wine, and being by digeſtion exalted into the higheſt purity of a nutritive ſubſtance, and conſequently becoming the life of man, being ſo Potentially, may Metaphorically be called *Homunculus*.

The proceſs, which in part ſhall be ſet down allegorically, is thus: Take the beſt Wheat, and the beſt Wine, of each a like quantity, put them into a Glaſs, which you muſt Hermetically cloſe: then let them putrefie in Horſe-dung three days, or until the Wheat begin to germinate, or to ſprout forth, which then muſt be taken forth, and bruiſed in a Mortar, and be preſſed through a linnen cloth, and there will come forth a white juice like Milk; you muſt caſt away the feces: Let this juyce be put into a Glaſs, which muſt not be above half full; ſtop it cloſe, and ſet it in Horſe-dung, as before, for the ſpace of fifty dayes, If the heat be temperate, and not exceeding the natural heat of a man, the matter will be turned into a ſpagyrical; bloud, and fleſh, like an Embryo. This is the principal, and next matter, out of which is generated a twofold ſperm, *viz.* of the father and mother, generating the *Homunculus*, without which,

which, there can be made no generation, whether humane, or animal.

From the bloud, and fleſh of this Embryo, let the water be ſeparated in *Balneo*, and the air in aſhes, and both be kept by themſelves. Then to the feces of the latter diſtillation, let the water of the former diſtillation be added; both which muſt (the Glaſs being cloſe ſtopt) putrefie in *Balneo*, the ſpace of ten days, after this diſtil the water the ſecond time, (which is then the *vehiculum* of the fire) together with the fire, in aſhes; then diſtil off this water in a gentle *Balneo*, and in the bottom remains the fire which muſt be diſtilled in aſhes. Keep both theſe apart. And thus you have the four Elements ſeparated from the Chaos of the Embryo.

The feculent earth is to be reverberated in a cloſe veſſel for the ſpace of four days: In the interim diſtil off the fourth part of the firſt diſtillation in *Balneo*, and caſt it away; the other three parts diſtil in aſhes, and pour it upon the reverberated earth, and diſtil it in a ſtrong fire; cohobate it four times, and ſo you ſhall have a very clear water, which you muſt keep by it ſelf: Then pour the air on the ſame earth, and diſtil it in a ſtrong fire, and there will come over a clear, ſplendid, odoriferous water, which muſt be kept a part: After this, pour the fire upon the firſt water, and putrefie them together in *Balneo* the ſpace of three days, then put them into a Retort, and diſtil them in Sand, and there will come over a water taſting of the fire: let this water be diſtilled in *Balneo*, and what diſtils off, keep by it ſelf, as alſo what remains in the bottom, which is the fire, keep by it ſelf. This laſt diſtilled water pour again upon its earth, and let them be macerated together in *Balneo* for the ſpace of three days, and then let all the water be diſtilled in Sand, and let what will ariſe be ſeparated in *Balneo*, and the reſidence remaining in the bottom be reſerved with the former reſidence. Let the water be again poured upon the earth, be abſtracted, and ſeparated as before, until nothing remain in the bottom, which is not ſeparated in *Balneo*. This being done, let the water which was laſt ſeparated be mixed with the reſidue of its fire, & be macerated in *Balneo* three or four days, and all be diſtilled in *Balneo*, that can aſcend with that heat, and let what remains be diſtilled in aſhes from the fire, and what ſhall

be elevated is aerial; and what remains in the bottom is fiery. Theſe two laſt Liquors are aſcribed to the two firſt principles, the former to Mercury, and the latter to Sulphur, and are accounted by *Paracelſus*, not as elements, but their vital parts, being, as it were, the natural Spirits and Soul, which are in them by nature. Now both are to be rectified, and reflected into their center with a circular motion, that this Mercury may be prepared with its water, being kept clear, and odoriferous in the upper place, but the Sulphur by it ſelf. Now it remains, that we look into the third principle: let the reverberated earth, being ground upon a Marble, imbibe its own water, which did above remain, after the laſt ſeparation of the Liquors made in *Balneo*, ſo that this be the fourth part of the weight of its earth, and be congealed by the heat of aſhes into its earth, and let this be done ſo oft, the proportion being obſerved, until the earth hath drunk up all its water. And laſtly, let this earth be ſublimed into a white powder, as white as ſnow, the feces being caſt away. This earth being ſublimed, and freed from its obſcurity is the true Chaos of the Elements, for it contains thoſe things occult, ſeeing it is the Salt of Nature, in which they lye hid, being, as it were, reflexed in their center. This is the third principle of *Paracelſus*, and the Salt, which is the matrix, in which the two former ſperms, *viz.* Of the man, and woman, the Parents of the *Homunculus*, *viz.* of Mercury, and Sulphur are to be put, and to be cloſed up together in a glazen womb, ſealed with *Hermes* ſeals for the true generation of the *Homunculus* produced from the ſpagyrical Embryo: and this is the *Homunculus*, or great *Arcanum*, otherwiſe called the nutritive Medicament of *Paracelſus*.

This *Homunculus*, or nutritive Medicament is of ſuch vertue, that preſently after it is taken into the body it is turned into bloud, and ſpirits. If then diſeaſes prove mortal, becauſe they deſtroy the Spirits, what mortal diſeaſe can withſtand ſuch a medicine, that doth ſo ſoon repair, and ſo ſtrongly fortifie the ſpirits, as this *Homunculus*, being as the Oyl to the flame, into which it is immediately turned, thereby renewing the ſame. By this Medicament therefore, as diſeaſes are overcome, and expelled, ſo alſo youth is renewed, and gray hairs prevented.

An

An artificial way to make Fleſh.

Take of the Crums of the beſt Wheaten-bread aſſoon as it comes forth out of the Oven, being very hot, as much as you pleaſe; put it into a Glaſs-veſſel, which you muſt preſently Hermetically cloſe. Then ſet it in digeſtion in a temperate *Balneo* the ſpace of two months, and it will be turned into a fibrous fleſh.

If any Artiſt pleaſe to exalt it to a higher perfection, according to the rules of Art, he may find out, how great a nouriſher and reſtorative Wheat is, and what an excellent medicine it may make.

Note, that there muſt be no other moiſture put into the Glaſs, beſides what is in the bread it ſelf.

Paracelſus *his way for the raiſing of a dead Bird to life, and for the generating many Serpents of one, both which are performed by putrefaction.*

A Bird is reſtored to life thus, *viz.* Take a Bird, put it alive into a Gourd-glaſs, and ſeal it up Hermetically; burn it to aſhes in the third degree of fire, then putrefie it in Horſe-dung into a mucilaginous phlegm, and ſo by a continued digeſtion, that phlegm muſt be brought to a further maturity (being taken out, and put into an oval veſſel of a juſt bigneſs to hold it) by an exact digeſtion, and will ſo become a renewed Bird: which ſaith *Paracelſus* is one of the greateſt wonders in Nature, and ſhews the great vertue of putrefaction.

2. Cut a Serpent into ſmall pieces, which put into a Gourd-glaſs, which you muſt Hermetically ſeal up, then putrefie them in Horſe-dung, and the whole Serpent will become living again in the Glaſs, in the form either of worms, or Spawn of Fiſhes; Now if theſe worms be in a fitting manner brought out of putrefaction, and nouriſhed; many hundred Serpents will be bred out of one Serpent, whereof every one will be as big as the firſt. And as it is ſaid of the Serpent, ſo alſo many other living creatures may be raiſed, and reſtored again.

To make an artificial Mallago Wine.

Firſt take a Wine-barrel well hooped, and dreſſed, with one end being open, to which a cloſe cover muſt be well fitted, which muſt be to take off and put on at pleaſure. Set it in a warm place Winter or Summer, and fill it full with clear and pure water, to each three gallons, put ſix pound of the beſt Mallago Raiſins, which you muſt bruiſe in a Stone-mortar, and then ſtrow upon the water, upon each twenty Gallons of which, you muſt caſt a handful of Calx-vive, then cover the veſſel cloſe with the cover, and caſt clothes upon it to keep it warm, and let it ſtand four or five days to work as Wine or Beer do, when they be new: then ſee if the Raiſins be riſen up to the top of the water; if ſo, then put them down again, and cover it again as before; let them thus ſtand three weeks or a month together, the Raiſins being every fourth or fifth day put down in caſe they riſe up. Then put a tap into the veſſel three or four fingers above the bottom, and try if it be good, and taſt like Wine; if not, let it ſtand a while longer; but if ſo, draw it off into another Wine-veſſel, and to every twenty gallons that you have drawn off, put a pint of the beſt *Aqua-vitæ*, two new laid Hens-eggs, and a quart of Alligant beaten well together, and let it ſtand in a cellar, as other Wine doth, till it be clear and fit to be drunk.

To make an artificial Claret-Wine.

Take ſix gallons of water, two gallons of the beſt Cidar, put thereunto eight pound of the beſt Mallago-Raiſins bruiſed in a Mortar; let them ſtand cloſe covered in a warm place the ſpace of a fortnight, every two days ſtirring them well together; then preſs out the Raiſins and put the liquor into the ſaid veſſel again, to which add a quart of the juyce of Kaſp-berries, and a pint of the juyce of Black-cherries, cover this Liquor with Bread ſpread thick with ſtrong Muſtard, the Muſtard-ſide being downward, and ſo let it work by the fire-ſide three or four days; then tun it up, and let it ſtand a week, and then bottle it up. And it will taſte as quick as bottle Beer, and indeed, become a very pleaſant drink,

and

and indeed ſart better, and wholſomer than our common Claret.

An artificial Malmſey.

Take two gallons of Engliſh Honey, put it into eight gallons of the beſt Spring-water, ſet theſe in a veſſel over a gentle fire, when they have boyled gently an hour, take them off, and when they be cold, put them into a ſmall Barrel, or Runlet, hanging in the veſſel a bag of Spices, and ſet it in the Cellar, and in half a year you may drink thereof.

To make an excellent aromatical Hypocras.

Take of Cinnamon two ounces, Ginger an ounce, Cloves and Nutmegs, of each two drams, of white Pepper half a dram, of Cardamums two drams, of Musk-Mallow-ſeed, three ounces. Let all theſe be bruiſed, and put into a bag, and hanged in ſix gallons of Wine. Note, that you muſt put a weight in the bag to make it ſink.

Some boyl theſe Spices in Wine, which they then ſweeten with Sugar, and then let run through a Hypocras-bag, and afterwards bottle it up, and uſe when they pleaſe.

A ſingle Hypocras-bag, or Manica Hippocratis.

When you would have this or any other Liquor to be very clear, you may uſe the triple Hypocras bag, for what feces paſſeth the firſt will ſtay in the ſecond, and what in the ſecond will ſtay in the laſt.

Note that theſe bags muſt be made of white Cotton.

A triple Hypocras bag is only one hanging above another after this manner.

To make excellent Hypocras Wine in an inſtant.

Take of Cinnamon two ounces, Nutmegs, Ginger, of each half an ounce, Cloves two drams, bruiſe theſe ſmall, then mix them with as much Spirit of Wine as will make them into a paſte, let them ſtand cloſe covered in a glaſs the ſpace of ſix dayes in a cold place, then preſs out the Liquor, and keep it in a glaſs.

A few drops of this Liquor put into any Wine giveth it a gallant reliſh, and odour, and maketh it as good as any Hypocras whatſoever, and that in an inſtant.

Note, that if the Wine be of it ſelf harſh, it will not be amiſs to ſweeten it with Sugar, for thereby it is made farr more grateful.

This

This alſo being put into Beer will make it very pleaſant, and aromatical.

Another way to make Hypocras, or to make any Wine to taſt of any vegetable in an inſtant.

Take what Wine you pleaſe, and according as you would have it taſt of this or that ſpice, or any other vegetable, of one or more together, you may drop a few drops of the diſtilled Oil of the ſaid ſpices, or vegetables into the Wine, and brew them well together, and you may make in an inſtant all ſorts of Hypocras or other Wines: as for example, if you would have Wormwood Wine, two or three drops of Oyl of Wormwood put into good Rheniſh-wine, being well brewed together, will make a Wormwood Wine exceeding any that you ſhall meet withal in the Rheniſh-wine houſes.

To make good Raſpberry-wine.

Take a gallon of Sack, in which let two gallons of Raſpberries ſtand ſteeping the ſpace of twenty four hours, then ſtrain them, and put to the Liquor three pound of Raiſins of the ſun ſtoned; let them ſtand together four or five dayes, being ſometimes ſtirred together: Then pour off the cleareſt, and put it up in bottles, and ſet it in a cold place. If it be not ſweet enough, you may add ſome Sugar to it.

Two other Wayes to make it all the year at an inſtant.

Take of the juice of Raſpberries, put it into a bottle, which you muſt ſtop cloſe, and ſet in a cellar, and it will become clear, and keep all the year, and become very fragrant.

A few ſpoonfuls of this put into a pint of Wine ſweetned well with Sugar gives it an excellent and full taſt of the Raſpes.

If you put two or three ounces of the Syrup of Raſpes to a pint of Wine it will do as well, but then you need uſe no other ſugar, for that will ſweeten it ſufficiently.

To

To make Mead or Metheglin that it ſhall taſt ſtale, and quick, within a fortnight, and be fit to drink.

To every three gallons of water, put one gallon of the pureſt Honey, put what hearbs and ſpices you pleaſe, boyl it, and skim it well, now and then putting in ſome water: When it is ſufficiently boyled, take it off, and when it is almoſt cold, put it into a wooden veſſel, and ſet it by the fire ſide, cover it over with Bread ſpread thick with the ſtrongeſt Muſtard, the Muſtard ſide being downwards, and ſo let it ſtand three dayes, and it will work, only put a cloth over it: Then tun it up, and after a week, draw it forth into bottles, and ſet it into a cellar; and after a week more you may drink of it, for it will taſt as quick as bottle beer that is a fortnight old, and indeed as ſtale as other Mead will in half a year.

To make a Spirit of Amber-grieſe, that a few drops thereof ſhall perfume a pint of Wine moſt richly.

Take of Amber-grieſe two drams, of Musk a dram, cut them ſmall, and put them into a pint of the beſt rectified Spirit of Wine, cloſe up the glaſs Hermetically, and digeſt them in a very gentle heat till you perceive they are diſſolved: Then you may make uſe of it.

Two or three drops or more if you pleaſe of this Spirit, put into a pint of Wine, give it a rich odour.

Or if you put two or three drops round the brims of the glaſs, it will do as well.

Half a ſpoonful of it taken either of it ſelf, or mixed with ſome ſpecifical Liquor, is a moſt rich Cordial.

An excellent ſweet Water.

Take a quart of Orange-flower Water, as much Roſe-water, add thereto of Musk-willowſeeds groſſely bruiſed four ounces, of Benjamin two ounces, of Storax an ounce, of Labdanum ſix drams, of Lavender flowers two pugils, of ſweet Majoram

as

as much, of *Calamus Aromaticus* a dram, diſtil all theſe in a Glaſs-ſtill in *Balneo*, the veſſels being very well cloſed, that no vapour breath forth.

Note, that you may make a ſweet Water in an inſtant by putting a few drops of ſome diſtilled Oyls together into ſome Roſe-water, and brewing them well together.

To purifie and to give an excellent ſmell, and taſt unto Oyl-Olive, that they that loath it, may delight to eat it.

Take of a good ſort of Oyl-Olive, though not of the beſt, put the ſame into a veſſel of earth or copper, that hath a little hole in the bottom thereof, which you may ſtop with wax or a cork, to open at your pleaſure. In this veſſel for every quart of Oyl add four quarts of fair water, and with a wooden-ſpatle, or ſpoon, beat them well together for a quarter of an hours ſpace; and when you have ſo done, open the hole in the bottom, and let out the water, for the Oyl doth naturally fleet above, as being the lighter body: and as ſoon as the water is paſſed away, ſtop the hole, and put in other cold water, and begin a new agitation as before, and work in the like manner divers times as you did at the firſt, till in the end the Oyl be well cleanſed, and clarified. If the laſt time you work it with Roſe-water it will be ſo much the better; then hang in the midſt of the Oyl a courſe bag full of Nutmegs ſliced, and Cloves bruiſed, and the rinds of Orenges and Lemons cut ſmall, and ſet the veſſel in *Balneo* for two or three hours, and I ſuppoſe he that loaths Oyl will be eaſily by this means drawn to a liking of it.

Another way.

Set Oyl-Olive in the ſun in ſummer-time until there ſettle good ſtore of foul, and groſs Lees, from the which by declination pour out the clear Oyl, and keep it till the next winter, and after the ſame hath been congealed with ſome froſty weather, the Oyl will be moſt ſweet, and delectable to the taſt.

After this manner you may clarifie all thick Oyls, and all kinds of greaſe, but then you muſt uſe warm water in ſtead of cold.

To puriſie Butter that it ſhall keep freſh and ſweet a long time, and be moſt wonderful ſweet in taſt.

Diſſolve Butter in a clean glazed or ſilver veſſel, and in a pan or kettle of water, with a ſlow and gentle fire; then pour the ſame ſo diſſolved, into a baſon that hath ſome fair water therein, and when it is cold, take away the curds, and the whey that remain in the bottom. And if you will be at the charge thereof, you may the ſecond time (for it muſt be twice diſſolved) diſſolve the Butter in Roſe-water, working them well together: the Butter thus clarified will be as ſweet in taſt as the marrow of any beaſt, by reaſon of the great impurity that is removed by this manner of handling, the fiſt part thereof being droſs, which makes the Butter many times offenſive to the ſtomack.

To make Butter taſt of any vegetable without altering the colour thereof.

When the Butter is taken out of the chern, and well worked from the ſerous part thereof, mix with the ſaid Butter as much of the Oyl of that Vegetable which you like beſt, till the ſame be ſtrong enough in taſt to your liking, then temper them well together.

If you do in the moneth of *May* mix ſome Oyl of Sage with your Butter it may excuſe you from eating Sage with your butter.

If you mix the Oyl with the aforeſaid clarified Butter, it will be far better, and ſerve for a moſt dainty diſh, and indeed a great rarity.

To

To make Cheeſe taſt ſtrong of any vegetable without diſcolouring of it.

You may mix the diſtilled Oyl of what vegetable you would have the Cheeſe taſte of, with the curd, before the whay be preſſed out; but be ſure you mix them very well, that all places may taſte alike of it; you may make it taſte ſtronger or weaker of it, as you pleaſe, by putting in more or leſs of the Oyl.

To purifie and refine Sugar.

Make a ſtrong *Lixivium* of Calx vive, wherein diſſolve as much courſe Sugar as the *Lixivium* will bear, then put in the White of Eggs (two to every quart of the Liquor) being beaten into an Oyl, Stir them well together, and let them boyl a little, and there will ariſe a ſcum, which muſt be taken off as long as any will ariſe; then pour all the Liquor through a great Woollen cloth bag, and ſo the feces will remain behind in the bag; then boyl the Liquor again ſo long, till ſome drops of it being put upon a cold plate, will when they be cold, be congealed as hard as Salt. Then pour out the Liquor into pots, or moulds made for that purpoſe, having a hole in the narrower end thereof, which muſt be ſtopped for one night after, and after that night be opened, and there will a moiſt ſubſtance drop forth, which is called Moloſſes, or Treakle; then with Potters-clay cover the ends of the Pot, and as that clay ſinketh down by reaſon of the ſinking of the Sugar, fill them up with more clay, repeating the doing thereof till the Sugar ſhrink no more. Then take it out till it be hard, and dryed, then bind it up in Papers.

To make a Vegetable grow and become more glorious then any of its ſpecies.

Reduce any Vegetable into its three firſt principles, and then joyn them together again, being well purified, and put the ſame into a rich earth, and you ſhall have it produce a Vegetable far more glorious than any of its ſpecies.

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Now how to make ſuch an Eſſence, look into the firſt Book, and there you ſhall ſee the proceſs thereof.

To make a Plant grow in two or three hours.

Take the aſhes of Moſs, moiſten them with the juyce of an old dunghil, being firſt preſſed forth, and ſtreined; then dry them a little, and moiſten them as before: do this four or five times; put this mixture, being neither very dry, nor very moiſt, into ſome earthen, or metalline veſſel; and in it ſet the ſeeds of Lettice, Purſlain, or Parſly, (becauſe they will grow ſooner than other Plants) being firſt impregnated with the Eſſence of a vegetable of its own ſpecies, (the proceſs whereof you ſhall find Book 1. page 32, 33.) till they begin to ſprout forth; then, I ſay, put them in the ſaid earth with that end upwards which ſprouts forth: Then put the veſſel into a gentle heat, and when it begins to dry, moiſten it with ſome of the ſaid juyce of dung.

Thou maiſt by this means have a Sallet grow whileſt ſupper is making ready.

To make the Idea of any Plant appear in a Glaſs, as if the very Plant it ſelf were there.

The proceſs of this thou maiſt ſee, page 32. and therefore I need not here again repeat it; only remember, that if you put the flame of a Candle to the bottom of the Glaſs, where the Eſſence is, by which it may be made hot, you will ſee, that thin ſubſtance, which is like impalpable Aſhes, or Salt, ſend forth from the bottom of the Glaſs, the manifeſt form of a Vegetable, vegetating and growing by little and little, and putting on ſo fully the form of ſtalks, leaves, and flowers, in ſuch perfect, and natural wiſe in apparent ſhew, that any one would believe verily the ſame to be naturally corporal, when as in truth it is the ſpiritual Idea, endued with a ſpiritual Eſſence; which ſerveth for no other purpoſe, but to be matched with its fitting earth, that ſo it may take unto it ſelf a more ſolid body. This ſhadowed figure, aſſoon as the Veſſel is taken from the fire, returns

to

to its Aſhes again, and vaniſheth away, becoming a Chaos, and confuſed matter.

To make Firre-trees appear in Turpentine.

Take as much Turpentine as you pleaſe, put it into a Retort, diſtil it by degrees, when all is diſtilled off, keep the Retort ſtill in a reaſonable heat, that what humidity is ſtill remaining may be evaporated, and it become dry: Then take this off from the fire, and hold your hand to the bottom of the Retort, and the Turpentine that is dryed (which is called *Colophonia*) will crack aſunder in ſeveral places, and in thoſe cracks, or chaps, you ſhall ſee the perfect effigies of Firre-trees which will there continue many months.

To make Harts-horn ſeemingly to grow in a Glaſs.

Take Harts-horn broken into ſmall pieces, and put them into a Glaſs-Retort to be diſtilled, and you ſhall ſee the Glaſs to be ſeemingly full of Horns, which will continue there ſo long till the volatile Salt come over.

To make Golden Mountains, as it were, appear in a Glaſs.

Take of Adders Eggs half a pound, put them into a Claſs-Retort, diſtil them by degrees; when all is dry, you ſhall ſee the feces at the bottom turgid, and puffed up, and ſeem to be, as it were, Golden Mountains, being very glorious to behold.

To make the repreſentation of the whole World in a Glaſs.

Take of the pureſt Salt-Nitre as much as you pleaſe, of Tin half ſo much; mix them together, and calcine them Hermetically; then put them into a Retort, to which annex a Glaſs-Receiver, and lute them well together, let there be leaves of Gold put into the bottom thereof, then put fire to the Retort, until vapours ariſe that will cleave to the Gold: augment the fire till no more fumes aſcend: then take away

the Receiver, and cloſe it Hermetically, and make a Lamp-fire under it, and you will ſee repreſented in it the Sun, Moon, Starrs, Fountains, Flowers, Trees, Fruits, and indeed, even all things, which is a glorious ſight to behold.

To make the four Elements appear in a Glaſs.

Take of the ſubtle powder of Jeat, an ounce and half of the Oyl of Tartar made *per deliquium* (in which there is not one drop of water, beſides what the Tartar it ſelf contracted) two ounces, which you muſt colour with a light green with Verdegreaſe, of the pureſt Spirit of Wine tinged with a light blew with Indico, two ounces of the beſt rectified Spirit of Turpentine coloured with a light red with Madder 2. ounces. Put all theſe into a Glaſs, and ſhake them together, and you ſhall ſee the Jeat which is heavy and black, fall to the bottom and repreſent the earth; next the Oyl of Tartar made green, repreſenting the element of water, falls: upon that ſwims the blew Spirit of Wine which will not mix with the Oyl of Tartar, and repreſents the Element of Air: uppermoſt will ſwim the ſubtle red Oyl of Turpentine, which repreſents the Element of Fire.

It is ſtrange to ſee, how after ſhaking all theſe together, they will be diſtinctly ſeparated the one from the other. If it be well done, as it is eaſie enough to do: it is a moſt glorious ſight.

To make a perpetual motion in a Glaſs.

Take ſeven ounces of Quickſilver, as much Tin, grind them well together with fourteen ounces of Sublimate, diſſolved in a cellar upon a Marble the ſpace of four days, and it will become like Oyl-Olive, which diſtil in Sand, and there will ſublime a dry ſubſtance; then put the water which diſtils off, back upon the earth in the bottom of the Still, and diſſolve what you can; filter it, and diſtil it again, and this do four or five times; and then that earth will be ſo ſubtle, that being put into a Viol, the ſubtle atoms thereof will move up and down for ever.

Note, that the Viol, or Glaſs, muſt be cloſe ſtopt, and kept in a dry place.

To

To make a Luminous Water that shall give light by night.

Take the tails of Glo-worms, put them into a Glass-Still, and distil them in *Balneo*; pour the said water upon more fresh tails of Glo-worms; do this four or five times, and thou shalt have a most Luminous Water, by which thou maist see to read in the darkest night.

Some say this Water may be made of the skins of Herrings; and for ought I know, it may be probable enough: for I have heard, that a shole of Herrings coming by a Ship in the night, have given a great light to all the Ship.

It were worth the while, to know the true reason, why Glo-worms, and Herring, and some other such like things, should be luminous in the night.

To make a vapour in a chamber, that he that enters into it with a candle, shall think the room to be on fire.

Dissolve Camphire in rectified *Aqua-vitæ*, and evaporate them in a very close chamber, where no air can get in, and he that first enters the chamber with a lighted candle will be much astonished, for the chamber will seem to be full of fire, very subtle, but it will be of little continuance.

You must note, that it is the combustible vapour, with which the chamber is filled, that takes flame from the candle.

Divers such like experiments as this may be done, by putting such a combustible vapour into a Box, or Cubboard, or such like, which will assoon as any one shall open them, having a candle in his hand, take fire, and burn.

To make Powder that by spitting upon shall be inflamed.

Take a Load-stone, powder it, and put it into a strong calcining pot, cover it all over with a powder made of Calx-vive, and Colophonia, of each a like quantity; put also some of this Powder under it: when the Pot is full, cover it, and lute the closures with Potters-earth, put them into a Furnace, and there let them boyl,

boyl; then take them out and put them into another pot, and set them in the Furnace again, and this do till they become a very white and dry Calx. Take of this Calx one part, of Salt-Nitre, being very well purified, four parts, and as much Camphire, Sulphur-vivum, the Oyl of Turpentine, and Tartar; grind all these to a subtle powder, and searse them, and put them into a Glass-vessel; then put as much Spirit of Wine well rectified, as will cover them two fingers breadth; then close them up, and set the vessel in Horse-dung three months, and in that time they will all become an uniform paste: evaporate all the humidity, until the whole mass become a very dry stone: then take it out and powder it, and keep it very dry.

If you take a little of this Powder, and spit upon it, or pour some water upon it, it will take fire presently, so that thou maist light a match, or any such thing by it.

To fortifie a Load-stone, that it shall be able to draw a Nail out of a piece of Wood.

Take a Load-stone, and heat it very hot in coals, but so, that it be not fired, then presently quench it in the Oyl of *Crocus Martis* made of the best Steel, that it may imbibe as much as it can.

Thou shalt by this means make the Load-stone so very strong and powerful, that thou maist pull out nails out of a piece of wood with it, and do so wonderful things with it, that the common Load-stone can never do.

Now the reason of this (as *Paracelsus* saith) is, because the Spirit of Iron is the life of the Load-stone, and this may be extracted from, or increased in the Load-stone.

To make Quick-silver Malleable in seven hours.

Take of the best Lead, and melt it, and pour it into a hole, and when it is almost congealed, make a hole in it, and presently fill up the hole with Quick-silver, and it will presently be congelated into a friable substance; then beat it into a powder, and put it again into a hole of fresh melted Lead, as before; do this

this three or four times, then boyl it, being all in a piece in Lin-ſeed-Oyl the ſpace of ſix hours; then take it out and it will be come malleable.

Note, that after this, it may by being melted over the fire be reduced into Quick-ſilver again.

A thin plate of the ſaid Mercury laid upon an inveterate Ulcer, takes away the malignity of it in a great meaſure, and renders it more curable than before.

A plate of the ſaid Mercury laid upon tumors, would be a great deal better repercuſſive than plates of Lead, which Chirurgeons uſe in ſuch caſes.

The powder of the friable ſubſtance of Mercury before it be boyled in the Oyl, is very good to be ſtrewed upon old ulcers, for it doth much correct the virulency of them.

To reduce Glaſs into its firſt Principles, viz. Sand, and Salt.

Take bits, or powder of Glaſs, as much as you pleaſe, as much of the Salt which Glaſs-men uſe in the making of Glaſſes: melt theſe together in a ſtrong fire; Then diſſolve all the melted maſs in warm water; then pour off the water, and you ſhall ſee no Glaſs, but only Sand in the bottom, which Sand is that which was in the Glaſs before.

This confutes the vulgar opinion, *viz.* that the fuſion of Glaſs is the laſt fuſion, and beyond all reduction.

To Write or engrave upon an Egge, or Pibble, with Wax, or Greaſe.

Make what letters or figures you pleaſe with Wax, or Greaſe, upon an Egge, or Pibble; put them into the ſtrongeſt Spirit of Vinegar, and there let them lye two or three days, and you ſhall ſee every place about the letters, or figures, eaten or conſumed away with the ſame Spirit, but the place where the Wax or Greaſe was, not at all touched: the reaſon whereof is, becauſe that the Spirit would not operate upon the ſaid oleaginous matter.

To make artificial Pearl, as glorious as any Oriental.

Diſſolve Mother of Pearl in Spirit of Vinegar; then precipitate it with Oyl of Sulphur *per campanam*, (and not with Oyl of Tartar, for that takes away the ſplendour of it) which adds a luſtre to it: when it is thus precipitated, dry it, and mix it with whites of Eggs, and of this maſs you may make Pearls of what bigneſs or faſhion you pleaſe: before they be dryed they will not at all, or very hardly be diſcerned from true and natural Pearls.

To make a Mineral Perfume.

Diſſolve Antimony, or Sulphur, in the Liquor or Oyl of Flints, or Pebles, or Cryſtals, or Sand; coagulate the ſolution into a red maſs, pour thereon the Spirit of Urine, and digeſt them till the Spirit be tinged; then pour it off, and pour more on, till all the tincture be extracted; put all the tinctures together, and evaporate the Spirit of Urine in *Balneo*, and there will remain a bloud-red Liquor at the bottom, upon which pour Spirit of Wine, and you ſhall extract a purer tincture, which ſmelleth like Garlick; digeſt it three or four weeks, and it will ſmell like Balm; digeſt it longer, and it will ſmell like Muſk, or Amber-greiſe.

Beſides the ſmell that it hath, it is an excellent Sudorifick, and cures all diſeaſes that require ſweat; as the Plague, putrid Feavers, *Lues-venerea*, and ſuch like as theſe.

The Oyl or Liquor of Sand, Flints, Pebles, or Cryſtals, for the aforeſaid preparation is thus made.

Take of the beſt Salt of Tartar being very well, by two or three diſſolutions, and coagulations, purified, and powdered in a hot Mortar, one part; of Flints, Pebles, or Cryſtals, being powdered, or ſmall Sand well waſhed, the fourth part; mingle them well together; put as much of this compoſition as will fill an Egge-ſhell, into a Crucible, ſet in the earthen Furnace, (expreſſed

preſſed page 84.) and made red hot, and preſently there will come over a thick and white Spirit, this do till you have enough; then take out the Crucible whileſt it is growing hot, and that which is in it is like tranſparent Glaſs, which keep from the air.

The Spirit may be rectified by Sand in a Glaſs-Retort.

The Spirit is of excellent uſe in the Gout, Stone, Ptiſick, and indeed, in all obſtructions, provoketh Sweat, and Urine, and cleanſeth the Stomach, and by conſequence effectual in moſt diſeaſes.

It being applyd externally, cleareth the skin, and makes it look very fair.

Take that which remains at the bottom in the Crucible, and beat it to powder, and lay it in a moiſt place, and ſo it diſſolveth into a thick fat Oyl: And this is that which is called the Oyl of Sand, of Flints, Pebles, or Cryſtals.

This Oyl is of wonderful uſe in medicine, as alſo in the preparation of all ſorts of Minerals.

This Oyl being taken inwardly in ſome appropriated Liquor, diſſolves tartarous coagulations in the body, and ſo opens all obſtructions.

It precipitates metals, and makes the Calx thereof more weighty than Oyl of Tartar doth.

It is of a golden nature; it extracts colours from all metals, is fixed in all fires, maketh fine Cryſtals, and Borax, and maturifieth imperfect metals into Gold.

If you put it into water, there will precipitate a moſt fine white earth, of which you may make as clear veſſels as are China-diſhes.

Note, that all Sand, Flints, and Pebles, even the whiteſt have in them a golden Sulphur, or Tincture; and if a prepared Lead be for a time digeſted in this Oyl, it will ſeem, as it were, gilded, becauſe of the Gold that will hang upon it, which may be waſhed away in water. Gold alſo is found in Sand and Flints, *&c.* And if you put Gold into this Oyl, it will become more ponderous thereby.

To make Steel grow in a Glaſs like a Tree.

Diſſolve Steel in a rectified Spirit of Salt, ſo ſhall you have a green and ſweet ſolution, which ſmels like Brimſtone, filter it, and abſtract all the moiſture in the Sand with a gentle heat, and there will diſtil over a Liquor as ſweet as Rain-water (for Steel by reaſon of its dryneſs detains the corroſiveneſs of the Spirit of Salt; which remaineth in the bottom like a bloud red maſs, which as hot on the tongue as fire, diſſolve this red maſs in Oil of Flints, or of Sand, and you ſhall ſee it grow up in two or three hours, like a Tree with a ſtem, and branches; prove this Tree at the teſt, and it yieldeth good Gold, which this Tree hath drawn from the aforeſaid Oyl of Sand, or Flints, which hath a golden Sulphur in it.

To melt a metal in ones hand without burning of the hand.

Take a little Calcining-Pot in your hand, make it in a lane or courſe of the powder of any metal, then upon it lay a lane of Sulphur, Salt-peter and Saw-duſt, of each a like quantity, mixed together; put a coal of fire to it, and forthwith the metal will be melted into a maſs.

An obſervation upon the beams of the Sun, and heat of the fire, how they add weight to Minerals, and Metalline Bodies.

1. Take any Mineral Liquor, and ſet it in an open veſſel in the Sun for a good ſpace, and it will be augmented in quantity, and weight. But ſome will ſay, that this proceedeth from the air, to the which I anſwer, and demand; whether the air had not this impregnation from the Sun, and what the air hath in it ſelf, that proceedeth not from the Sun and Stars.

2. Put this liquor in a cold cellar, or in a moiſt air, and you ſhall find that it increaſeth not in weight, as it doth in the Sun, or in the fire, (which hath in this reſpect ſome Analogie with the Sun) I do not ſay, but haply it might attract ſome little moiſture which is ſoon exhaled by any ſmall heat.

3. Diſſolve

3. Diſſolve any ſulphureous, and imperfect metal, as Iron, Copper, or Zink, in *Aqua-fortis*, or any other acid Spirit; then abſtract the Spirit from it, make it glowing hot, yet not too hot, that the Spirit may only vapour away, then weigh this metalline Calx, and ſet it in a crucible over the fire, but melt it not, only let it darkly glow, let it ſtand ſo three or four weeks, then take it off, and weigh it again, and you ſhall find it heavier than before.

4. Set any ſulphureous metal, as Iron, or Copper, with fifteen or eighteen parts of Lead on a teſt made with aſhes of Wood, or Bones, in a probatory Furnace: Firſt weigh the Teſt, Copper, and Lead, before you put them into the Furnace; let the Iron or Copper fly away with the Lead, yet not with too ſtrong a heat; then take the Teſt out, and weigh it, and you ſhall find it (though the metals be gone) when it is cold to be heavier than it was when it was put into the Furnace with the metals. The queſtion is now, whence this heavineſs of all the aforeſaid Minerals and Metals proceeded, if that the heat of the Sun, and fire through the help of the Minerals and Metals be not fixed into a palpable Mineral, and Metalline Body?

5. Set a Teſt with Lead, or Copper in the Sun, and with a concave Glaſs unite the Beams of the Sun, and let them fall on the center of the Metal; hold the concave Glaſs in your hand, and let your Teſt never be cold, and this will be as well done in the Sun, as in the Fire. But this concave muſt be two foot in Diameter, and not too hollow or deep, but about the eighteenth or twentieth part of the circle, that it may the better caſt its beams forth; and it muſt be very well poliſhed.

6. Calcine Antimony with a Burning-Glaſs, and you ſhall ſee it ſmoak, and fume, and be made dryer than before; yet weigh it and it will be heavier than before.

I ſhall take in, for the confirmation of all this; a relation of Sir *Kenelme Digby* concerning the precipitating of the Sun-beams. I remember (ſaith he) a rare experiment that a noble man of much ſincerity, and a ſingular friend of mine told me he had ſeen, which was, that by means of Glaſſes made in a ve-

ry particular manner, and artificially placed one by another, he had ſeen the Sun-beams gathered together; and precipitated down into a browniſh, or purpliſh red powder. There (ſaith he) could be no fallacy in this operation: For nothing whatſoever, was in the Glaſs, when they were placed, and diſpoſed for this intent; and it muſt be in the hot time of the year, elſe the effect would not follow. And of this magiſtery he could gather ſome dayes neer two ounces in a day, and it was of a ſtrong volatile vertue, and would impreſs its ſpiritual quality into Gold it ſelf (the heavieſt and moſt fixed body we converſe withal) in a very ſhort time.

I leave it now to the Reader to judge whether the beams of the Sun, and heat of the fire adde weight to Minerals, and Metals.

To extract a White Milkie ſubſtance from the raies of the Moon.

Take a Concave-Glaſs, and hold it againſt the Moon when ſhe is at the full in a clear evening, and let the raies thereof, being united, fall upon a Sponge, and the Sponge will be full of a cold Milkie ſubſtance, which you may preſs out with your hand, and gather more. *De-La-Broſs* is of opinion, that this ſubſtance is of the ſubſtance of the Moon: but I cannot aſſent to him in that; only this I ſay, if this experiment were well proſecuted, it might produce, for ought I know, ſuch a diſcovery which might be the key to no ſmall ſecrets.

To condenſe the Air in the heat of Summer, and in the heat of the day, into Water.

Fill an earthen Veſſel unglazed, made pointed downward, and fill it with Snow-water, (which muſt be kept all the year) in which is diſſolved as much Nitre as the water would diſſolve: Let the Veſſel be cloſe ſtopt. Hold this Veſſel againſt the Sun, and the Air will be ſo condenſed by the coldneſs of the Veſſel, that it will drop down by the ſides thereof.

How

How two ſorts of Volatile Salts will be fixed by joyning them together.

Take a ſtrong *Lixivium* made of unſlaked lime, and evaporate it, and whereas you would expect to find a Salt at the bottom, there is none; for all the Salt in the *Lixivium* is evapoured away, and the more the liquor is evaporated, the weaker the *Lixivium* becomes, which is contrary to other *Lixiviums*: Alſo if you take Spirit of Vinegar, and evaporate it, you ſhall find no Salt at the bottom. Now, if you take the clear *Lixivium* of Lime, and Spirit of Vinegar, of each a like quantity, mix them together, and evaporate the humidity thereof, you ſhall find a good quantity of Salt at the bottom, which taſts partly hot, and partly acid.

This Salt being ſet in a cold cellar on a Marble-ſtone, and diſſolved into an Oyl, is as good as any *Lac-virginis* to clear, and ſmooth the face, and dry up any hot puſtules in the skin, as alſo againſt the Itch, and old Ulcers to dry them up.

To make an unguent that a few grains thereof being applyed outwardly, will cauſe vomiting or looſeneſs, as you pleaſe.

Take *Lapis infernalis*, mix therewith of diſtilled Oyl of Tobacco, as much as will make an Ointment: Keep it in a dry place.

If you would provoke vomiting, anoint the pit of the ſtomach with five or ſix grains thereof, and the party will preſently vomit, and as much as with taking of a vomit.

If you would provoke to looſeneſs, anoint about the navil therewith, and the Patient will preſently fall into a looſeneſs.

Note, that you muſt give the Patient ſome warm ſuppings all the time this medicine is working.

Note alſo, and that eſpecially, that you let not the Ointment lye ſo long as to cauterize the part to which it is applyed.

To

To make a medicine that half a grain thereof being taken every morning, will keep the body ſoluble.

Take of the diſtilled Oyl of Tobacco, of which let the eſſential ſalt of Tobacco imbibe as much as it can; Then with this compoſition make ſome Lozenges, by adding ſuch things as are fitting for ſuch a form of medicine; Note, that you put but ſuch a quantity of this Oily ſalt, as half a grain only may be in one Lozenge.

One of theſe Lozenges being taken every morning, or every other morning, keepeth the body ſoluble, and is good for them as are apt to be very coſtive in their bodies.

Note, that you may put ſome aromatical ingredient into the Lozenges that may qualifie the offenſive odour of the Oyl, if there ſhall be any.

To make a Cordial, ſtomachical, and purgative tincture.

Make a tincture of *Hiera picra* with Spirit of Wine well rectified, and aromatized with Cinamon or Cloves.

Two or three ſpoonfuls of this tincture being taken in a morning twice in a week wonderfully helps thoſe that have weak and foul ſtomachs, it openeth obſtructions, and purgeth viſcoſities of the ſtomach and bowels, cureth all inveterate headach, killeth worms, and indeed leaveth no impurities in the body, and is very Cordial: for it exceedingly helps them that are troubled with faintings. There is nothing offenſive in this medicine but the bitterneſs thereof, which the other extraordinary vertues will more then ballance.

Another.

Diſſolve Scammony in Spirit of Wine, evaporate the one moity; then precipitate it by putting Roſe-water to it; and it will become moſt white, for the black and fetid matter will lie on

on the top of the precipitated matter which you muſt waſh away with Roſe-water. Then take that white gum being very well waſhed, and dry it (if you pleaſe you may powder it and ſo uſe it, for indeed it hath neither ſmell nor taſt, and purgeth without any offence, and may be given to children, or to any that diſtaſt phyſick, in their milk or broth without any diſcerning of it, and indeed it doth purge without any manner of gripings. I was wont to make it up into pills with Oyl of Cinamon or Cloves, which gave it a gallant ſmell, and of which I gave a ſcruple, which wrought moderately and without any manner of gripings) then diſſolve it again in Spirit of Wine, being aromatized with what ſpices you pleaſe, and this keep.

This tincture is ſo pleaſant, ſo gentle, ſo noble, a purgative, that there is ſcarce the like in the World, for it purgeth without any offence, is taken without any nauſeating, and purgeth all manner of humours, eſpecially choler, and melancholy, and is very Cordial.

It may be given to thoſe that abhor any medicine, as to children, or thoſe that are of a nauſeous ſtomach.

The doſe is from half a ſpoonful to two or three.

Note, it muſt be taken of it ſelf, for if it be put into any other Liquor, the Scammony will precipitate and fall to the bottom.

After this manner you may prepare Jollap by extracting the gumme therefore, and then diſſolving it in Spirit of Wine.

By this means Jollap would not be ſo offenſive to the ſtomach, as uſually it is, for it is the gumme that is purgative, and the earthlineſs that is ſo nauſeous.

Jollap being thus prepared, is a moſt excellent medicine againſt all hydropick diſeaſes, for it purgeth water away without any nauſeouſneſs or griping at all.

To reduce diſtilled Turpentine into its body again.

Take the Oyl of Turpentine, and the Colophonia thereof (which is that ſubſtance which remains in the bottom after diſtillation) which you muſt beat to powder. Mix theſe together and digeſt them, and you ſhall have a Turpentine of the ſame conſiſtency as before, but of a fiery ſubtle nature.

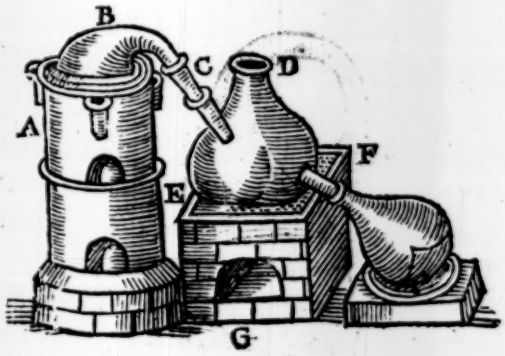
Pills made of this Turpentine, are of excellent uſe in obſtructions of the breaſt, kidneyes, and the like.

To make the diſtilled Oyl out of any hearb, ſeed or flower, in an inſtant, without any furnace.

You muſt have a long pipe made of tin, which muſt have a bowl in the middle, with a hole in it as big as you can put you finger into it; by which you muſt put your matter, that you would have the Oyl of. Set this matter on fire with a candle or coal of fire, then put one end of the pipe into a baſon of fair water, and blow at the other end, and the ſmoak will come into the water, and there will an Oyl ſwim upon the water, which you may ſeparate with a tunnel.

To make water, and the tincture of any Vegetable at the same time, which is an excellent way to draw out the vertue thereof.

This must be performed by these following vessels.



A, *Signifies the Furnace it self.*

B, *The Retort which stands in water or sand, wherein the matter to be distilled is put, instead whereof, if you please, you may put a gourd glass with a head to it.*

C, *The Pipe.*

D, *Another vessel, where is more fresh matter, out of which the tincture is to be drawn, and which stands upon ashes with a fire under it.*

E, *The Furnace with a pan of ashes.*

F, *The Receiver.*

G, *The hole of the Furnace to put in coals, to heat the second matter.*

A way to separate fresh water from salt, without a furnace or much trouble.

Take a Caldron with a great and high cover, having a beak or nose, set it upon a trefoot, and under it put fire: let this be filled with salt water, and there will presently di-

ſtill of a good quantity of freſh water into a Receiver, which muſt be joyned to the noſe of the aforeſaid cover.

This is of good uſe for Sea-men that want freſh water, for by this means they may diſtill a good quantity in 24 hours, eſpecially if they have any conſiderable number of the aforeſaid veſſels, a figure whereof is this which follows.

A way to purge and purifie troubled and muddy waters.

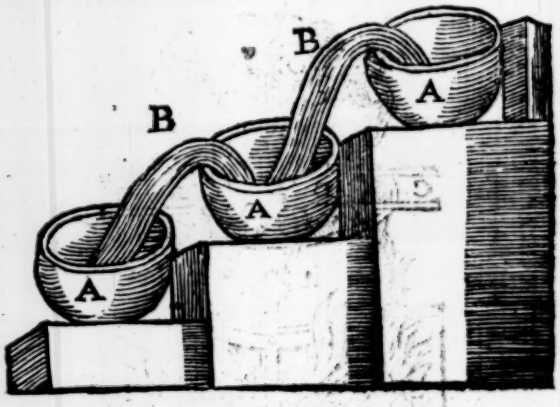
Fill a great pot with pudled water, put a ſoft and gentle fire under it, lay ſome ſticks acroſs on the pot brims, and upon the ſticks lay clean wooll, or a ſpung well waſhed; Now the wooll drinks up the vapours that aſcend, which then you muſt wring out, and lay on the wooll again, and this you may do till you have as much clean water as you deſire. The manner of this diſtillation is deſcribed thus.

A, *Signifies the Pot.*
B, *The Fire.*
C, *The Sticks.*
D, *The Wooll.*

This is of use for them that can come at no other waters but what are troubled, as it fals out many times in some places.

Another way to purifie any thick, muddy, or feculent Liquor.

This is performed by shreds of any white woollen cloth in vessels, as you see hereafter expressed.



A, *Signifies the vessels.*
B, *The shreds.*

Note, that the shreds must be first wet in fair water, and the feculent matter be put into the uppermost vessel.

Note also, whereas here be two Receivers, that in many cases one may be sufficient.

This way serves for the purifying of decoctions, juices, or dissolutions of salts from their feculency, for that which is distilled by the shreds is as clear as Crystal, when what remains is very feculent.

To keep fire in a glass, that whilest the glass is shut will not burn, but as soon as it is opened will be inflamed.

First extract the burning spirit of the salt of tin in a glass Retort well coated; when the Retort is cold, take it out and break it, and as soon as the matter in it, which remains in the bottom thereof after distillation, comes into the air, it will presently be inflamed. Put this matter into a glass viol, and keep it close stopt.

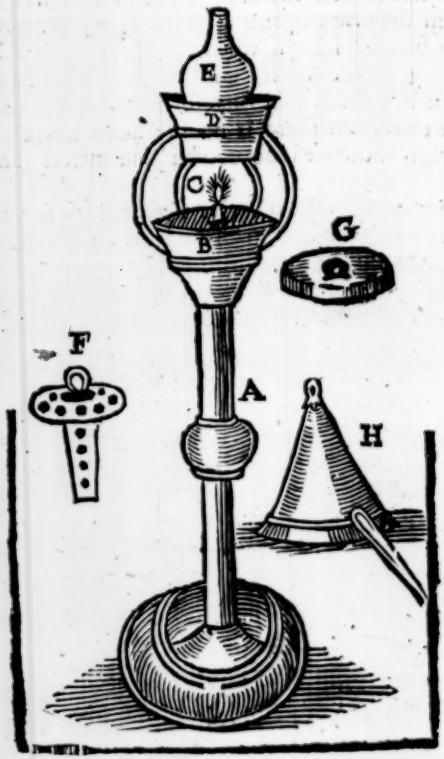
This

This fire will keep many thouſand years and not burn unleſs the glaſs be opened: but at what time ſoever that is opened it will burn,

It is conceived that ſuch a kind of fire as this was found in Vaults when they were opened, which many conceived to be a perpetual burning Lamp, when as indeed it was inflamed at the opening of the Vault, and the letting in air thereby, which before it lacked, and therefore could not burn: For it is to be conceived, that there is no fire burns longer then its matter endures, and there is no combuſtible matter can endure for ever.

There may be many uſes of ſuch a fire as this, for any man may carry it about with him, and let it burn on a ſuddain, when he hath any occaſion for fire.

A Lamp Furnace is made thus.



A, *Signifies the Candleſtick, which muſt be hollow, and full of water,*

B, *The top of the Candleſtick, which muſt be wide to contain good ſtore of water, for to fill up the Candleſtick as the candle riſeth up.*

C, *The Candle, which muſt be as long as the Candleſtick.*

D, *The*

D, *The veſſel that contains either Water, ſand, or aſhes, for any veſſel to be ſet into; alſo to contain any matter it ſelf, that is to be digeſted.*

E, *A glaſſe veſſel ſtanding in digeſtion.*

F, *A narrow mouthed ſtopple to be put into the Candleſtick to keep the Candle upright, and that muſt be made of Tin, with holes in it.*

G, *The Cover for the veſſel* D, *which is to be put upon it when any thing is decocted, or kept warm in it.*

H, *A Still head to put upon the veſſel* D, *when you would diſtill any thing in it.*

Note, that if you make all theſe veſſels large, you may do many conſiderable things without much labour, or trouble.

In the veſſel *D*, if it be large, you may ſtew meat, which if you put it in at night, and cover it cloſe, you may have it ready for your breakfaſt in the morning, and ſo accordiug to the time you put it in, you may have it for dinner or ſupper. Alſo you may keep any thing warm in the night, and at all times, and divers ſuch uſes as theſe it may be uſed for.

Note, that the Candle will ſtill riſe up, till it be quite burned out, and an ordinary Candle will laſt twice as long this way as it will out of the water.

If you would have one Candle laſt a long time, as twelve or twenty hours, you muſt either make your Candleſtick very long that it may contain a long Candle; or make your Candle big and the wick ſmall, or make your Candle of ſuch matter as will not preſently be conſumed.

Note alſo, that if you would have a great heat, your Candle muſt be great, and alſo the wick thereof great; but if gentle, let your Candle be ſmall

Another Lamp-Furnace.

There is another ſort of Lamp-Furnace, with three Candles, after this manner.

The uſe of this is, when you would have a conſtant fire that ſhould give a ſtronger heat than one Candle in the former Furnace. And the truth is, that if your Candles be big, (as you may make them as big as you will) you may have as ſtrong a heat this way as by Aſhes in an ordinary Furnace.

To make a Candle that ſhall laſt long.

Take unſlaked Lime, powder it and mix it with your Tallow, and ſo make your candle of that; or elſe you may make Candles of Caſtle-ſope, which will ſerve for ſuch uſes as theſe, *viz.* to burn in ſuch a Lamp-furnace.

Note, that it is the Salt that is in the Lime, and Sope that preſerves the Tallow from burning out ſo faſt as otherwiſe it would.

To

To make a laſting and durable Oyl.

Take unſlaked lime, Bay-ſalt, Oyl-Olive, of each a like quantity, mix them well together, and diſtil them in Sand, cohobate the Oyl upon the ſame quantity of freſh Lime, and Salt: and this do four or five times: By this means will the Oyl be clear, and impregnated with what ſalt was volatile in the lime, and ſalt.

Now that ſaline impregnation is, that which gives a durableneſs to the Oyl.

Note, that this Oyl, whileſt it is diſtilling, is of a moſt fragrant ſmell: I have ſome of it which I diſtilled ſeven times, and it is as pure, ſubtle and odoriferous, as many common diſtilled Oyls of Vegetables.

This Oyl, beſides the durableneſs of it, is alſo good againſt any inveterate ach in the limbs.

A Lamp made with this Oyl, will continue burning ſix times as long as a Lamp made of other Oyl, as alſo it burns very ſweet.

There muſt be a great deal of care uſed in making of it, or elſe you will quickly break your Glaſſes; alſo you muſt take very ſtrong lime, ſuch as the dyers uſe, and call cauk.

Philoſophical Bellows.

There be here ſet down three figures of theſe kinds of Inſtruments, which belong ro ſeveral uſes.

A, *Signifies that which blows a fire for the melting of any metal, or ſuch like operation, and it blows moſt forcibly with a terrible noiſe.*

B, *That which blows a Candle to make the flame thereof very ſtrong, for the melting of Glaſſes, and nipping them up.*

C, *That which any one may hold in their hand, to blow the fire ſtrongly upon any occaſion.*

Now the manner of the uſing them is this: you muſt firſt heat them very hot, then put the noſes thereof (which muſt have a very ſmall hole in them, no bigger then that a pins head may go in) into a veſſel of cold water, and they will preſently ſuck in the water, of which then being full, turn the noſes thereof toward the candle, or fire, which you would have blown

As,

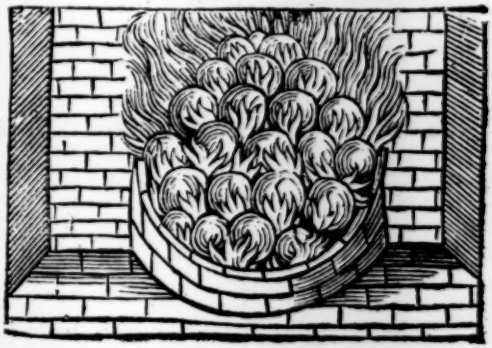
As for the figure *C*, it muſt have a mouth drawn up round, and hanging out an inch from the face, which mouth (the whole compaſs of the face being heated firſt) you muſt dip in cold water, and it will ſuck in water, as the noſes of the former did. This then you muſt hold cloſe to the fire that it may be heated, and it will blow exceedingly, as otherwiſe it will not, *viz.* if it be cold.

If you put ſweet water into ſuch a veſſel, you may perfume a chamber exceedingly, for a little quantity thereof will be a long time breathing forth.

Note; that theſe kinds of veſſels muſt be made of Copper, and be exceeding well cloſed, that they may have no vent but by their noſes.

An excellent invention to make a Fire.

Take three parts of the beſt *New-caſtle* coals beaten ſmall, one part of loam; mix theſe well together into a maſs with water, make thereof Balls, which you muſt dry very well.



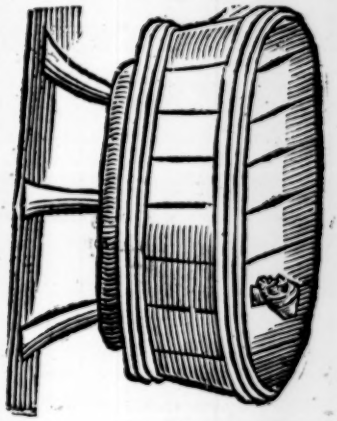
This fire is durable, ſweet, not offenſive by reaſon of the ſmoak, or cinder, as other coal-fires are; beautiful in ſhape, and is not ſo coſtly as other fire, burns as well in a Chamber even as Char-coal.

This fire may either ſerve for ſuch Diſtillations as require a ſtrong, and laſting heat, or for ordinary uſes, either in the Kitchen, or Chambers.

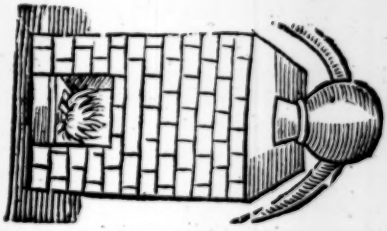
A new invention for Bathes.

Seeing by bathing and ſweating moſt diſeaſes are cured, eſpecially ſuch as proceed from wind, hot, and diſtempered humours, or cold and congealed humors, becauſe all theſe are rarified, and evaporated by tranſpiration in ſweating, or bathing, I thought it a thing much conducing to mans health, to ſet down ſuch a way of bathing and ſweating that might be very effectual, and appropriated to any particular diſeaſe or diſtemper.

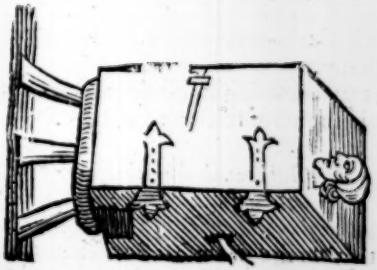
I ſhall therefore here commend to you a way of bathing by diſtillation, the manner of which you may ſee by theſe enſuing veſſels.



C



A



B

A, *Sig-*

A, *Signifies a hot Still with two pipes going into two Wooden veſſels; In this Still you may put either hearbs, or ſpices, with water, or with Spirits, and diſtil them; by which means, they that are in the veſſels will preſently be forced into a ſweat by vertue of the ſubtlety of the vapours. And this indeed is as good and effectual a way for ſweating as any can be invented: You may by this means appropriate your ingredients to the nature of the diſeaſes.*

B, *A veſſel wherein a man ſits in the bath. Now this veſſel hath in it a door for the eaſier going into it, which fashion is far better, and more convenient, than to be open only at the top.*

C, *A long veſſel where a man that is weak, and not able to ſit up, lies and is bathed.*

Now you muſt note, that theſe vapours muſt not be hotter than the Patient can bear: alſo if the vapour come forth too hot upon the body of the Patient, he may by putting a pipe upon the end of the pipe that comes into the veſſel, divert the hot vapour from his body, and ſo it will not offend him that way.

Note, that the Patient, aſſoon as he begins to be faint, muſt come forth, or elſe he will ſuffer more prejudice than good by his bathing; and alſo to prevent him from fainting, let him take ſome Cordial, or cold Beer, which will much revive him, and make him endure his bating longer, as alſo make him ſweat the more.

Aſſoon as the Patient comes forth, let him go into a warm bed, and ſweat as he is able to bear it, and take ſome Poſſet-drink, or Broth, or ſuch like warm ſuppings, as alſo ſome good Cordial if he be very faint.

The Patient may according as his ſtrength will bear, and his diſeaſe require, bath, more ſeldom or oftner.

An artificial hot Bath, made from the ſame principles as the natural Bath is.

Before I ſet down the proceſs of making an artificial hot Bath, I ſhall premiſe ſomethings concerning the true nature, and original of a hot Bath. Now the cleareſt and beſt account

that

that I ever heard or read, of the cause of the heat in Bathes is that which is given by *Mounsieur de Rochas*, & that in a demonstrative way; His words are these: As I was (saith he) with some of my companions wandring in *Savoy*, I found in the Valley of *Luzerne* betwixt the *Alps* a hot spring; I began to consider the cause of this heat, and whereas the vulgar opinion is, that the heat of Fountains is from Mountains fired within, I saw reason to think the contrary, because I saw Snow upon a Mountain from whence this hot Spring came, unmelted, which could not possibly but have been dissolved by the hot fumes of the Mountains, had they been fired. Whereupon being unsatisfied, I with my companions and other labourers (whom I could very hardly perswade to undertake such a business, by reason they were afraid that fire would thereupon break forth out of the ground and consume us) got tools and set upon digging to find out the true cause of the heat of this Fountain. After we had digged 15. dayes (having before perceived the water to be hotter and hotter by degrees as we came neerer to the source) we came to the original of the heat, where was a great ebullition: In three hours more, we digged beyond this place of ebullition, and perceived the water to be cold, yet in the same continued stream with the other that was hot: upon this I began to wonder much at the reason of these things. Then I carryed to my lodging some of this hot water (which was both saltish, and acid) and evaporated it; and of forty ounces I had in the bottom five drams of saltish matter, which I then yet farther purified, and extracted thence three drams of pure nitrous Hermetick Salt, the other two ounces being a slimie sulphurous substance: Yet with this I was not satisfied, but with my labourers went again to the place, and digged twelve days more, and then we came to a water which was insipid as ordinary Fountain Water, yet still in a continued stream with the saltish and hot water. At this I wondred much, whereupon I digged up some of the earth where the cold, and saltish stream did run, and carried it home with me, and out of a hundred weight thereof, I extracted a good quantity of nitrous Salt, which was almost fluxile. When I had extracted as much as I could, I laid the Earth aside, and in 24. hours it was all covered over

with Salt, which I extracted, and out of a hundeed weight of this Earth, which I call Virgin-earth, I had four pound of this kind of Salt which it contracted in the aforeſaid 24. hours: and ſo it would do conſtantly. Now this ſatisfied me concerning one doubt: For, before I was unſatisfied how there could be a conſtant ſupply of that ſalt which made the water ſaltiſh, ſeeing there was but a little diſtance betwixt the inſipid water and the hot water, and the conſtant ſtream of water waſhed away the Salt which was in that little ſpace: for I perceived that this kind of Earth attracts this univerſal Salt in the World, partly from the air in the cavities of the Earth, and partly from the vapours that conſtantly paſs through the Earth. After this, I took ſome of that Earth where the ebullition was, and carried it home, and proued it, and I perceived it to be a Sulphur-mine, into which the former acid ſaltiſh water penetrating cauſed an ebullition, as do Salt of Tartar, and Spirit of Vitriol being mixed together, and alſo water poured on unſlaked Lime. After this, I began to queſtion, how it was, that this Sulphur-mine was not conſumed, ſeeing ſo much matter paſſeth from it daily: but when I began to underſtand, how all things in the earth did aſſimilate to themſelves whatſoever was of any kind of affinity to them, as Mines convet the Tools of Miners into their own ſubſtance in a little time, and ſuch like experiments of that nature, I was ſatisfied. And after all this, I underſtood how this univerſal Salt of the World was to be had, and I could at any time mix it with water, and pour that Water upon Sulphur, and ſo make an artificial hot Bath as good as any natural Bath whatſoever. Note, that no Salt in the World but this Nitrous Salt will do it, as I often tryed: And this Salt is to be found in all hot Bathes, and to be prepared artificially. Thus farr *Mounſeur de Rochas*. Something like unto this *Helmont* ſeems to hold forth, ſaying that there is a *Primum ens ſalium*, or *ſemina ſalium*, which are all ſeated in waters and vapours, and give them an acidity, but as yet have no ſaline taſte, until they meet with ſuch principles, and be received into certain matrixes in the Earth, which may make them put forth this potential ſaltneſs into act: and according to this diverſity of places, that this water or vapours, being impregnated with thoſe ſeeds of Salt, go through, ariſeth the diverſity of

Salts,

Salts, as Alum, Sea-ſalt, Nitre, *&c.* Then upon this account the Earth through which the cold, acid, ſaltiſh water aboveſaid, doth run, did ſpecificate that potential Salt which was both in the waters and vapours, into a nitrous Salt, (by which means was that kind of Salt in that place) but whether this *primum ens ſalium* be ſo unſpecificated, or *quid Hermaphroditicum*, as he alſerts, or no, it matters not much to my purpoſe; it ſufficeth, if that Earth through which that acid nitrous water runs, attracts and multiplies an acid nitrous Salt, with which the water being impregnated, and running through a ſulphurous Mine, cauſeth an ebullition. All this being premiſed, I ſhall now endeavour to illuſtrate how Nature may in this be imitated, as that an artificial hot Bath may be made by ſuch like principles, as the natural hot Bath conſiſts of, being artificially prepared.

Now theſe principles are the Sulphur-mine, and the acid nitrous Salt; the former requires no further preparation (as ſaith *Mounſeur de Rochas*,) if it be pure: the latter is to be prepared two manner of wayes: for either it is to be extracted, as ſaith the foreſaid Author out of the waters of the Bath by evaporating them away, or by condenſing the nitrous air (for indeed, as many judicious Philoſophers are of opinion, the Air is wholly nitrous, as it appears by the condenſation of it in cold places into Nitre) which his Virgins-Earth did do, into a Salt, which was acid: and almoſt fluxil. Now, when I ſay, that the nitrous Salt is to be thus prepared, I do not ſay, that this is the full preparation thereof; for indeed, it is yet further to be prepared, and that is by giving it a greater acidity. I queſtion much, whether or no, the Salt being prepared after the aforeſaid wayes, do retain that acidity which is required for that ebullion I ſpake of, and which the nitrous acid water had before it came to the Mine of Sulphur: For indeed, the aforeſaid Author, when he affirmed, that he could at any time make an artificial hot Bath, did not ſay, he uſed Salt prepared only after the two former wayes, *viz.* by extracting it out of the waters of the Bath, and making it with his Virgin-Earth which did attract, and condenſe the nitrouſneſs of the Air; but withal, by making it ſo acid, that it might cauſe an ebullition when it came to be joyned with a

Sulphur-Mine. Now then how to give this Nitre a ſufficient acidity, is the great queſtion. For the better effecting of this, we muſt conſider whence that nitrous water (above mentioned) in the earth had the greateſt part of its acidity. As to that, it muſt be remembred, that the Virgin-earth through which the acid nitrous water did run, did condenſe the nitrous air or vapours into a nitrous Salt, and withal it is to be conſidered, that before this nitrous air or vapour, before it be condenſed, even when it is neer unto condenſation is acid, and part of it before condenſation is mixed with the water, and ſo renders it acid. Now that waters have great part of their acidity from the acid vapours of acid Minerals, both *Henricus ab Heers*, and *Jordan*, upon Mineral waters affirm: and that Salts unbodyed, are farr more acid than when they have aſſumed a body, is clearly manifeſt in this, *viz.* that Spirits of Salts, which I call Salts unbodied, becauſe they have loſt their body, are become very acid, becauſe unbodied; if ſo in Spirits that have loſt their bodies, why not after ſome proportion in thoſe that have not yet aſſumed a body, as vapours of Nitre, or nitrous air being neer to congelation, and bodying, and impregnant with Spirits of Nitre.

Now I ſay, that nitrous vapours, or nitrous air being a Salt unbodyed are not ſo acid as Spirits of Nitre, becauſe they are more phlegmatick and crude, which phlegm they loſe by being congealed into a Salt: yet for all this, they are farr more acid than the body of Salt: and this is that which *Helmont* underſtands, when he ſaith, that the eſurine Salt being incorporificated is farr more active, in giving taſt and odour, than when it hath received its body, by becoming a ſpecificated Salt. Furthermore, how Nitre ſhall become ſufficiently acid for the aforeſaid operation, is the great matter to be enquired into. We muſt therefore conſider, which way we may unbody Nitre (ſeeing it is ſcarce poſſible to get it before it hath received its body) and that is done two wayes either by forcing of it into a moſt ſharp Spirit, which is too acid for our intenſion, or by digeſting the whole ſubſtance of Nitre into a liquor moderately acid, which indeed ſerves for our purpoſe, and the proceſs is this.

Take

Take the pureſt Nitre you can get, diſſolve it in Rain-water, ſo as that the water imbibe as much of it as it can. Then put this nitrous water into a common earthen veſſel unglazed, which you muſt ſet in a cellar. You ſhall ſee this veſſel in a ſhort time to be white all over on the outſide as with a hoar froſt, which whiteneſs is partly the floures of the Nitre being the pureſt part thereof penetrating the veſſel, and partly the nitrous air condenſed into Nitre by the coldneſs of the veſſel, as alſo aſſimilated to the Nitre that penetrated the veſſel. I ſaid by the coldneſs of the veſſel, becauſe ſuch is the coldneſs of an Earthen-veſſel wherein is Nitre, diſſolved in water, that it will being ſet in Snow by the fire-ſide forthwith be freezed. This Nitre you muſt ſtrike off with a feather, and when you have a ſufficient quantity thereof, as three or four pounds, put this, or the nitrous Salt extracted from Bath-waters into a bolt-head of Glaſs (a pound in each Bolt-head) that two parts of three be empty, nip it up, and ſet it in aſhes, and give it a reaſonable ſtrong fire, *viz.* that the upper part of the boul of the bolt-head be as hot, as that you can but well ſuffer your hand upon it, and you ſhall ſee that the Nitre will be diſſolved every day a little, and in two or three months time be wholly diſſolved, and become acid, but not ſo acid as the Spirit thereof; then put it into a Glaſs-gourd with a head, and diſtil it off, and in the bottom you ſhall find an acid nitrous Salt, almoſt fluxil, not unlike the Salt which *Mounſeur de Rochas*, found in the evaporating of his water. Then pour the diſtilled Nitre-water upon the ſaid Salt, and then it is for your uſe.

The uſe of theſe principles or ingredients is this, *viz.* make Fountain-water ſufficiently acid with this nitrous Liquor, then pour it upon a ſufficient quantity of the beſt Sulphur-Mine, or Sulphur-*vivum* in a large wooden veſſel where the Patient is to be bathed, and you will ſee the water preſently heated ſo hot as the Patient is able to bear.

The inward uſe of theſe Bath-waters, is by reaſon of the Nitre in them, to diſſolve groſs humors, open obſtructions, cleanſe the Kidneys and Bladder; and by reaſon of the Sulphur to dry, mollifie, diſcuſs, and glutinate, and to help all uterine defects proceeding from cold and windy humors.

Sulphur-Mine. Now then how to give this Nitre a ſufficient acidity, is the great queſtion. For the better effecting of this, we muſt conſider whence that nitrous water (above mentioned) in the earth had the greateſt part of its acidity. As to that, it muſt be remembred, that the Virgin-earth through which the acid nitrous water did run, did condenſe the nitrous air or vapours into a nitrous Salt, and withal it is to be conſidered, that before this nitrous air or vapour, before it be condenſed, even when it is neer unto condenſation is acid, and part of it before condenſation is mixed with the water, and ſo renders it acid. Now that waters have great part of their acidity from the acid vapours of acid Minerals, both *Henricus ab Heers*, and *Jordan*, upon Mineral waters affirm: and that Salts unbodyed, are farr more acid than when they have aſſumed a body, is clearly manifeſt in this, *viz.* that Spirits of Salts, which I call Salts unbodied, becauſe they have loſt their body, are become very acid, becauſe unbodied; if ſo in Spirits that have loſt their bodies, why not after ſome proportion in thoſe that have not yet aſſumed a body, as vapours of Nitre, or nitrous air being neer to congelation, and bodying, and impregnant with Spirits of Nitre.

Now I ſay, that nitrous vapours, or nitrous air being a Salt unbodyed are not ſo acid as Spirits of Nitre, becauſe they are more phlegmatick and crude, which phlegm they loſe by being congealed into a Salt: yet for all this, they are farr more acid than the body of Salt: and this is that which *Helmont* underſtands, when he ſaith, that the eſurine Salt being incorporificated is farr more active, in giving taſt and odour, than when it hath received its body, by becoming a ſpecificated Salt. Furthermore, how Nitre ſhall become ſufficiently acid for the aforeſaid operation, is the great matter to be enquired into. We muſt therefore conſider, which way we may unbody Nitre (ſeeing it is ſcarce poſſible to get it before it hath received its body) and that is done two wayes either by forcing of it into a moſt ſharp Spirit, which is too acid for our intenſion, or by digeſting the whole ſubſtance of Nitre into a liquor moderately acid, which indeed ſerves for our purpoſe, and the proceſs is this.

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Note, that they muſt be drunk warm, and in a good quantity, or elſe they will do more hurt than good.

The outward uſe of this is for ſuch ill effects as are in the habit of the body, and out of the veins, as of palſies, contractions, rheums, cold humors, affects of the skin and aches, for they reſolve, diſcuſs, cleanſe, mollifie, *&c.*

Now for the manner of bathing I ſhall not preſcribe any thing, but leave this to the diſcretion of the Phyſitian, who is to give order and directions for all the circumſtances about it: for indeed every one is not to bathe, when and how he pleaſeth, but muſt apply himſelf to an able Phyſitian, and ſubmit himſelf to his judgment and experience, or elſe may receive either prejudice, or no benefit thereby.

An artificial Tunbridge, and Epſome Water.

It is granted by all, that *Tunbridge* Water proceeds from an Iron-mine, but how it contracts that acidity, and that ironiſh and vitriolated taſte and odour, ſeeing upon evaporation thereof, there remains little or no Vitriol or Salt of Iron at the bottom, is the great queſtion: Now for the ſolution of this, we muſt conſider how many wayes a ſubterraneal mineral, or metal, may communicate its acidity to waters, and that ſaith *Henricus ab Heers*, upon Spaw-waters, it doth three ways; one, when the water paſſing through the Mines, carryeth along with it ſome of the diſſoluble parts of the Mine, to which is conſonant the ſaying of *Ariſtotle*: *Such are waters, as is the nature of thoſe Mines through which they paſs*, as alſo of *Galen*, when he ſaith, that *pure waters paſſing through Mineral Mines, carry with them ſome of the ſubſtance of the Mines.* The ſecond way is, when the vapours ariſing from fermented Minerals and Metals, are mixed with waters. Now that vapours retain the odour, and taſte of thoſe things, from whence they are raiſed, *Ariſtotle* in his fourth Book *Sublimium* affirms, and alſo *Helmont*, when he ſaith, *That ſome parts of the Iron-Mines being by fermentation turned into a vapour, retain the odour and taſt of the Mine, by vertue of the acid eſurine Salt, and are not preſently reduced into a body, and alſo artificial vapours of the Iron-Mines have more vertue, and*

active,

active, (I mean thoſe parts that are raiſed by a ſtrong fire in a furnace from the Mine of Iron) than Iron it ſelf when it is melted. The third is, when a great quantity of vapours ariſing from the aforeſaid fermented Mines is elevated, and by the coldneſs of the ambient earth is turned into an acid water, which as it paſſeth through the earth meeteth with ſome ſprings of water, and mixing with them gives them a pleaſant acidity. And this is the beſt of all acid waters being clear and very pure.

This being premiſed, I ſhall now proceed to the proceſs of making artificial waters, like to thoſe of *Tunbridge* and *Epſome*: of the former, *viz. Tunbridge* thus.

Take of the Mine, or Ore of Iron, beat it very ſmall, and put it into the furnace expreſſed page 84. and there will come forth an acid Spirit, and Floures, which you muſt mix together till the acid Spirit extract the Salt out of the Floures; then decant off the clear Liquor, which will have a ſtrong taſte and ſmell off Iron.

A few drops of this Liquor put into a Glaſs full of Fountain-water, give it the odour and taſte of *Tunbridge*-water, and communicates the ſame operations to it.

It openeth all obſtruſhions, purgeth by Urine, cleanſeth the Kidneys, and Bladder, helpeth the piſſing of bloud, the ſtopping of the Urine, and dificulty of making water, it allayeth all ſharp humors, cureth inward Ulcers, and Impoſtumes, cleanſeth and ſtrengtheneth the Stomach, and Liver, *&c.*

Note, that Fountain-water being made moderately acid with this acid ironiſh Liquor, may be taken from a pint to ſix pints, but by degrees; and after the taking of it, moderate exerciſe is to be uſed, and faſting to be obſerved, till all the water be gone out of the body, which will be in ſeven or eight hours.

Epſome-water is made artificially thus. Take of the Mine of Allum, or Allum-ſtones, powder it very ſmall, and diſtil it in the Furnace expreſſed page 103. and there will diſtil over a certain acid alluminiſh water, which muſt be mixed with a double quantity of Nitre-water, (the preparation whereof is ſet down in the proceſs of making the artificial hot Bath). Now you muſt know, that *Epſome* water hath a certain kind of

acid

acid taſte, which is partly alluminous and partly nitrous; which proceedeth from nitrous air, and vapours ariſing from the fermentation of alluminous Mines; being firſt mixed together, and then mixed with the Fountains paſſing through the Earth.

If you put a few drops of this Liquor into a Glaſs full of Fountain-water, it will give it the odour, and taſt of *Epſome*-water, that you ſhall ſcarce diſcern them aſunder either by that odour, or operation.

This water is purgative, and indeed purgeth eſpecially all ſharp burning humors, cools an inflamed, and opens an obſtructed body; cleanſeth the Kidneys and Bladder, cureth inward Ulcers, and Impoſtumes, is a very good Preſervative againſt the Conſumption, *&c.*

Fountain-water made acid with this Liquor, may be taken from a pint to ſix or eight, but by degrees, and after it moderate exerciſe muſt be uſed, and faſting till the water be out of the body; only ſome thin warm ſuppings may be taken to help the working thereof. Some take this water warm.

To make artificial Precious-ſtones of all ſorts of colours.

Take Cryſtalline white Pibble-ſtones that are very white throughout, and have no mixture of any other colour, which you ſhall find in Fountains, and on the Sands of the Sea. Put them into a Crucible, make them glowing hot (covering the Crucible) then caſt them into cold water, by which means they will crack, and be eaſily reduced into a powder; Take the powder thereof, and put the like quantity of pure Salt of Tartar thereto, which Salt muſt not be made in any metalline but Glaſs-veſſels, that it may have no mixture of any other colour. To this mixture you may add what colour you pleaſe, which muſt be of a mineral or a metalline nature; then put them into a very ſtrong Crucible, which muſt be but half full, and then covered, and there melt them in a ſtrong fire, till they become like Glaſs. Note, that when this mixture is in melting, you muſt put an Iron-rod into it, and take up ſome of it, and if there appear no corns of gravel in it, it is enough; If otherwiſe, you muſt melt

melt it longer. The especial Minerals and Metals that give colours are these, *viz.* Copper, Iron, Silver, Gold, Wismut, Magnesia, and Granats.

Common Copper makes a Sea-green; Copper made out of Iron a Grass-green; Granats, a Smaragdine-green; Iron yellow, or a Hyacinth-colour; Silver, white, yellow, green, and granat-colour, Gold a fine skie-colour, Wismut common blew; magnesia, an amethyst colour: And if you will mix two or three of these together they will give other colours. For Copper and Silver mixed together give an Amethyst colour: Copper, and Iron a pale-green; Wismut, and Magnesia, a purple colour; Silver, and Magnesia divers colours like as an Opal. If you would have this mass not to be transparent but Opac, you may adde the Calx of Tin to it when it is in melting: as if you would make *Lapis-luzuli*; then to your mixture coloured with Wismut adde the Calx of Tin, and this mixture when it is almost ready to congeal cast into a mould, where some powder of gold hath been scattered, and by this means it will become full of Golden-veins very like true *Lapis-lazuli*, which is very plesant to behold. You may by these foresaid preparations cast what forms of figures you please, of what colour you please.

The Metals, and Minerals for the making of colours ought to be thus prepared, *viz.*

Plates of Copper must be made red hot, and then quenched in cold water, of which then take five or six grains, and mix them with an ounce of the aforesaid mixture, and melt them all together, and they will colour it Sea-green.

Iron must be made into a Crocus in a Reverberatory fire, and then eight or ten grains thereof will tinge the mixture into a yellow, or hyacinth colour.

Siver is to be dissolved in *Aqua-fortis*, and precipitated with Oyl of Flints, then dulcified with water, and afterward dryed; of this five or six grains give a mingled colour.

Gold must be dissolved in *Aqua-regis*, and precipitated with the Liquor of Flints, then sweetned, and dryed, and five or six grains thereof giveth the finest Saphir colour to an ounce of the mixture.

If Gold be melted with *regulus martis nitrosus*, five or six grain thereof give to an ounce of the mass a most incomparable rubine colour.

Magnesia may be powdred only, and then ten or twelve grains thereof make an amethyst colour.

Wismut must be dissolved in *Aqua-regis*, and precipitated with Liquor of Flints, then sweetened, and dryed; and then of this four or five grains turn an ounce of the mass into a Saphir-colour, but not so natural as Gold doth.

Granata may be powder only, and then ten or fifteen grains thereof tinge an ounce of the mass into a fine green colour not unlike to the natural Smaragdine.

To prove what kind of metal there is in any Ore, although you have but a very few grains thereof, so as that you cannot make proof thereof the ordinary way with Lead.

Take two or four grains (if you have no greater quantity) of any Ore that you have, put it to half an ounce of Venice-glass, and melt them together in a Crucible, (the Crucible being covered) and according to the tincture that the Glass receiveth from the Ore, so may you judg what kind of metal there is in the Ore; for if it be a Copper-Ore, then the Glass will be tinged with a Sea-green colour.

If Copper and Iron, a Grass-green.

If iron, a dark yellow.

If Tin, a pale yellow.

If Silver, a whitish yellow.

If Gold, a fine skie-colour.

If Gold and Silver together, a Smaragdine-colour.

If Gold, Silver, Copper, and Iron together, an amethyst colour.

A pretty observation upon the melting of Copper and Tin together.

First make two Bullets of red Coper of the same magnitude, make also two Bullets of the purest Tin in the same mould, as the others were made: weigh all four Bullets, and observe the

the weight well: then melt the Copper-bullets firſt; upon them being melted put the Tin-bullets, and melt them together, but have a care that the Tin fume not away: Then caſt this molten mixture in the ſame moulds as before, and it will ſcarce make three Bullets, but yet they weigh as heavy as the four did, before they were melted together.

I ſuppoſe the Copper condenſeth the body of the Tin, which before was very porous, which condenſation rather adds than diminiſheth the weight thereof.

A remarkable obſervation upon the melting of Salt-Armoniack, and Calx-vive together.

Take Salt-Armoniack, and Calx-vive, of each a like quantity, mix, and melt them together. Note, that Calx of it ſelf will not melt in leſs than eight hours with the ſtrongeſt fire that can be made, but being mixed with this ſalt melts in half an hour, and leſs, like a metal, with an indifferent fire.

This mixture being thus melted, becomes a hard ſtone, out of which you may ſtrike fire as out of a Flint, which if you diſſolve again in water, you ſhall have a Salt-Armoniack in the ſame quantity as before, but fixed.

Note, that hard things have their congelation from Salt-Armoniack, as horns, bones, and ſuch like; for little fixed Salt can be extracted from them, only Volatile and Armoniack.

An ounce of any of theſe Volatile-ſalts, (as of Horns, Bones, Amber, and ſuch like) reduced into an acid Liquor by diſtillation, condenſeth, and indurateth a pound of Oily-matter.

An eaſie and cheap powder like unto Aurum fulminans.

Take of Salt of Tartar one part, Salt-peter three parts, Sulphur a third part; grind theſe well together, and dry them. A few grains of this powder being fired, will give as great a clap as a muſket when it is diſcharged.

To make an Antimonial Cup, and to caſt divers figures of Antimony.

Take the beſt crude Antimony very well powdered, Nitre, of each a pound, of crude Tartar finely powdered two pounds, mix them well together, and put them into a Crucible; cover the Crucible, and melt them, and the *regulus* will fall to the bottom, and be like a melted metal; then pour it fourth into a Braſs-mortar, being firſt ſmeered over with Oyl.

Or,

Take two parts of powdered Antimony, and four parts of powder of crude of Tartar, melt theſe as aforeſaid.

This *regulus* you may (when you have made enough of it) melt again and caſt it into what moulds you pleaſe, you may either make Cups, or what Pictures you pleaſe, and of what figures you pleaſe. You may caſt it into forms of ſhillings, or half-crowns, either of which, if you put it into two or three ounces of Wine in an Earthen-glaz'd veſſel, or Glaſs, and infuſe it in a modetate heat all night, you may have a Liquor in the morning which will vomit: of which the doſe is from two drams to two ounces and half.

Note, that in the Wine you may put a little Cinamon, to correct and give a more grateful reliſh to it.

It is the cuſtom to fill the Antimonial-cup with Wine, and to put as much Wine round about, betwixt that and the little Earthen-cup where it ſtands, and ſo infuſe it all night, and then drink up all that Wine: but I fear, that ſo much Wine will be too much as being three or four ounces, when as we ſeldom exceed the quantity of two ounces of the infuſion of Antimony.

Theſe Cups, or Pictures will laſt for ever, and be as effectual after a thouſand times infuſion, as at firſt: and if they be broken at any time, (as eaſily they may, being as brittle as Glaſs) they may be caſt again into what forms you pleaſe.

Note, that he that caſts them muſt be skilful in making his ſpawde, as alſo in ſcouring of them, and making them bright afterwards: for if they be carefully handled they will look even as bright as ſilver.

The

The Spagyrical Anatomy of Gold, and Silver, together with the Curioſities therein, and chiefeſt preparations thereof.

BOOK VI.

I Shall firſt endeavour to ſhew whence Gold had its original, and what the matter thereof is. As Nature (ſaith *Sandivogius*) is in the will of God, and God created her: ſo Nature made for her ſelf a ſeed: (*i.*) her will in the elements. Now ſhe indeed is one, yet ſhe brings forth divers things; but ſhe operates nothing without a Sperm; whatſoever the Sperm will, Nature operates, for ſhe is, as it were, the inſtrument of any Artificers. The Sperm therefore of every thing is better, and more profitable than Nature her ſelf: for thou ſhalt from Nature without a Sperm, do as much as a Goldſmith without fire, or a Husbandman without grain or ſeed. Now the Sperm of any thing is the Elixir, the Balſom of Sulphur, and the ſame as *Humidum Radicale* is in metals: but to proceed to what concerns our purpoſe. Four Elements gene-

rate a Sperm, by the will of God, and imagination of Nature: For as the Sperm of a man hath its center, or the veſſel of its ſeed in the Kidneys; ſo the four Elements by their indefinent motion (every one according to its quality) caſt forth a Sperm into the center of the Earth, where it is digeſted, and by motion is ſent abroad. Now the center of the Earth is a certain empty place, where nothing can reſt: and the four Elements ſend forth their qualities into the circumference of the center. As a male ſends forth his ſeed into the womb of the female, which after it hath received a due portion caſts out the reſt, ſo it happens in the center of the Earth, that the magnetick power of a part of any place attracts ſomething convenient to it ſelf, for the bringing forth of ſomething, and the reſt is caſt forth into ſtones and other excrements: For every thing hath its original from this Fountain, and there is nothing in the world produced but by this Fountain: as for example, ſet upon an even Table a veſſel of water, which may be placed in the middle thereof, and round about it ſet divers things, and divers colours alſo; Salts, *&c.* every thing by its ſelf: then pour the water into the middle; and you ſhall ſee water to run every way, and when any ſtream toucheth the red colour, it will be made red by it, if the ſalt, it will contract the taſte of ſalt from it, and ſo of the reſt: Now the water doth not change the places, but the diverſity of places changeth the water. In like manner the ſeed or ſperm being caſt forth by the four Elements from the center of the earth unto the ſuperficies thereof, paſſeth through various places, and according to the nature of the place is any thing produced: if it come to a pure place of earth, and water a pure thing is made.

The ſeed, and ſperm of all things is but one, and yet it generates divers things, as it appears by the former example. The ſperm, whileſt it is in the center, is indifferent to all forms; but when it is come into any determinate place, it changeth no more its form. The ſperm whileſt it is in the center, can as eaſily produce a tree, as a metal, and an herb as a ſtone, and one more precious than another, according to the purity of the place. Now this ſperm is produced of Elements

ments thus. Theſe four Elements are never quiet but by reaſon of their contrariety mutually act one upon another; and every one of its ſelf ſends forth its own ſubtilty, and they agree in the center. Now in this center is the *Archæus*, the ſervant of Nature, which mixing thoſe ſperms together, ſends them abroad, and by diſtillation ſublimes them by the heat of a continual motion unto the ſuperficies of the earth: For the earth is porous; and this vapour (or wind, as the Philſophers call it) is by diſtilling through the pores of the earth reſolved into water, of which all things are produced. Let therefore, as I ſaid before, all ſons of Art know, that the ſperm of metals is not different from the ſperm of all things being, *viz.* a humid vapour: Therefore in vain do Artiſts endeavour the reduction of metals into their firſt matter, which is only a vapour. Now ſaith *Bernard Treviſan*, when Philoſophers ſpeak of a firſt matter, they did not mean this vapour, but the ſecond matter, which is an unctuous water, which to us is the firſt, becauſe we never find the former. Now the ſpecification of this vapour into diſtinct metals, is thus. This vapour paſſeth in its diſtillation through the earth, through places either cold, or hot; if through hot, and pure, where the fatneſs of Sulphur ſticks to the ſides thereof; then that vapour (which Philoſophers call the Mercury of Philoſophers) mixeth, and joyneth it ſelf unto that fatneſs, which afterwards it ſublimes with it ſelf, and then it becomes, leaving the name of a vapour, an unctuoſity, which afterwards coming by ſublimation into other places, which the antecedent vapour did purge, where the earth is ſubtle, pure, and humid, fills the pores thereof, and is joyned to it; and ſo it becomes gold: and where it is hot, and ſomething impure, ſilver: But if that fatneſs comes to impure places, which are cold, it is made lead: and if that place be pure and mixed with Sulphur, it becomes Copper: for by how much the more pure and warm the place is, ſo much the more excellent doth it make the metals.

Now this firſt matter of metals is a humid, viſcous, incombuſtible, ſubtle ſubſtance, incorporated with an earthy ſubtility, being equally, and ſtrongly mixed *per minima* in the caverns of the

the earth. But as in many things there is a twofold unctuoſity (whereof one is, as it were, internal, retained in the center of the thing leſt it ſhould be deſtroyed by fire, which cannot be without the deſtruction of the ſubſtance it ſelf wherein it is: the other, as it were, external, feculent, and combuſtible) ſo in all metals, except Gold, there is a twofold unctuoſity: the one which is external, ſulphurous, and inflamable, which is joyned to it by accident, and doth not belong to the total union, with the terreſtrial parts of the thing: the other is internal, and very ſubtle, incombuſtible, becauſe it is of the ſubſtantial compoſition of *Argent-vive*, and therefore cannot be deſtroyed by fire, unleſs with the deſtruction of the whole ſubſtance, whence it appears what the cauſe is, that metals are more or leſs durable in the fire: For thoſe which abound with that internal unctuoſity are leſs conſumed, as it appears in Silver, and eſpecially in Gold. Hence *Roſarius* ſaith, the Philoſophers could never by any means find out any thing that could endure the fire; but that unctuous humidity only which is perfect, and incombuſtible. *Geber* alſo aſſerts the ſame, when he ſaith, that imperfect bodies have ſuperfluous humidities, and ſulphureity generating a combuſtible blackneſs in them, and corrupting them; they have alſo an impure, feculent and combuſtible terreſtriety ſo groſs, as that it hinders ingreſſion, and fuſion: but a perfect metal, as gold, hath neither this ſulphurous or terreſtrial impurity; I mean, when it is fully maturated, and melted, for whileſt it is in concoction, it hath both joyned to it, as you may ſee in the golden Ore, but then they do not adhere to it ſo, but that it may be purified from them, which other metals cannot, but are both deſtroyed together, if you attempt to ſeparate the one from the other: Beſides Gold hath ſo little of theſe corruptible principles mixed with it, that the inward ſulphur or metalline ſpirit doth ſometimes, and in ſome places overcome them of it ſelf, as we may ſee in the Gold which is found very pure ſometimes in the ſuperficies of the earth, and in the Sea-ſands, and is many times as pure as any refined Gold.

Now this Gold which is found in Sands and Rivers, is not generated there, as ſaith *Gregorius Agricola*, in his third Book *de*

Re

Re Metallica, but is waſhed down from the Mountains with Fountains that run from thence. There is alſo a flaming Gold found (as *Paracelſus* ſaith) in the tops of Mountains, which is indeed ſeparated of it ſelf from all impurities, and is as pure as any refined gold whatſoever. So that you ſee, that gold although it had an extrinſecal Sulphur and earth mixed with it, yet it is ſometimes ſeparated from it, of it ſelf, *viz.* by that fiery ſpirit that is in it. Now this pure gold (as ſaith *Sandivogius*) nature would have perfected into an elixir, but was hindred by the crude air; which crude air is indeed nothing elſe but that extrinſecal Sulphur which it meets with, and is joyned to in the earth, and which fills with its violence the pores thereof, and hinders the activity of the Spirit thereof; and this is that priſon which the Sulphur (as ſaith the aforeſaid Author) is locked up in, ſo that it cannot act upon its body, *viz.* Mercury, and concoct it into the ſeed of gold, as otherwiſe it would do: and this is that dark body (as ſaith *Penotus*) that is interpoſed betwixt the Philoſophical Sun and Moon, and keeps off the influencies of the one from the other. Now if any skilful Philoſopher could wittily ſeparate this adventitious impurity from gold, whileſt it is yet living, he would ſet Sulphur at Liberty, and for this his ſervice he ſhould be gratified with three Kingdoms, *viz.* Vegetable, Animal, and Mineral, I mean, he could remove that great obſtruction which hinders gold from being digeſted into the Elixir. For as ſaith *Sandivogius*, the Elixir, or tincture of Philoſophers, is nothing elſe but gold digeſted into the higheſt degree: for the gold of the vulgar is as an hearb without ſeed; but when gold (*i.*) living gold (for common gold never can, by reaſon that the Spirits are bound up, and indeed as good as dead, and not poſſibly to be reduced to that activity which is required for the producing of the ſperm of gold) is ripened, it gives a ſeed, which multiplies even *ad infinitum*. Now the reaſon of this barrenneſs of gold that it produceth not a ſeed, is the aforeſaid crude air, *viz.* impurities: You may ſee this illuſtrated by this example.

We ſee that Orenge-trees in *Polonia* do grow like other trees; alſo in *Italy*, and elſewhere, where their native ſoil

is, and yield fruit, becauſe they have ſufficient heat, but in theſe colder Countries they are barren and never yield any fruit, becauſe they are oppreſſed with cold: but if at any time nature be wittily and ſweetly helped; then Art can perfect what Nature could not. After the ſame manner it is in metals; for Gold would yield fruit, and ſeed in which it might multiply it ſelf, if it were helped by the induſtry of the skilful Artiſt, who knew how to promote Nature (*i.*) to ſeparate theſe Sulphurous and Earthly impurities from Gold: For there is a ſufficient heat in living Gold, if it were ſtirred up by extrinſecal heat, to digeſt it into a ſeed. By extrinſecal heat, I do not mean the heat of the celeſtial Sun, but that heat which is in the earth and ſtirs up the ſeed, (*i*) the living ſpirit that is in all ſubterraneal ſperms to multiply, and indeed makes Gold become Gold. Now this is a heat of putrefaction, occaſioned by acid ſpirits fermenting in the earth, as you may ſee by this example related by *Albertus Magnus*, but to which the reaſon was given by *Sandivogius*. There was, ſaith the former Author, certain grains of Gold found betwixt the teeth of a dead man in the grave: wherefore he conceived there was a power in the body of a man to make and fix gold: but the reaſon is farr otherwiſe, as ſaith the latter Author; for, ſaith he, *Argent vive* was by ſome Phyſitian conveyed into the body of this man, when he was alive, either by unction, or by turbith, or ſome ſuch way as the cuſtom was; and it is the nature of Mercury to aſcend to the mouth of the patient, and through the excoriation of the mouth to be avoided with the flegm. Now then, if in ſuch a cure the ſickman dyed, that Mercury, not having paſſage out, remained betwixt the teeth in the mouth, and that carkaſs became the natural veſſel of Mercury, and ſo for a long time being ſhut up was congealed by its proper Sulphur into Gold by the natural heat of putrefaction, being purified by the corroſive flegm of the carkaſs, but if the Mineral Mercury had not been brought in thither, Gold had never been produced there: And this is a moſt true example, that as Mercury is by the proper Sulphur that is in it ſelf, being ſtirred up and helped by an extrinſecal heat, coagulated into Gold, unleſs it be hindered by

by any accident, or have not a requisite extrinsecal heat, or a convenient place; so also that nature doth in the bowels of the earth, produce of Mercury only Gold and Silver, and other metals according to the disposition of the place, and matrix; which assertion is further cleared by the rule of reduction, for if it be true, that all things consist of that which they may be reduced into, then Gold consists of Mercury, because (as most grant, *Paracelsus* affirmes, and many at this day profess they can do) it may be reduced into it. There is a way by which the tincture of Gold, which is the soul thereof, and fixeth it, may be so fully extracted, that the remaining substance will be sublimed like Arsenick, and may be as easily reduced into Mercury as Sublimate. If so, and if all Mercury may be reduced into a transparent water, as it may (according to the process set down page 94. and as I know how another better and easier way to turn a pound of Mercury, of it self, into a clear water in half an hour, which is one of the greatest secrets I know, or care to know, together with what may be produced thence, and shall crave leave to be silent in) why may not that water, in some sense, if it be well rectified, be called a kind of living Gold, out of which you may perhaps make a medicine, and a *Menstruum* unfit for the vulgar to know. It appears now, from what is premised, that the immediate matter of Gold is probably Mercury, and not certain Salts, and I know not what, as many dream of; and that the extrinsecal heat is from within the earth, and not the heat of the Sun, as some imagine (because in the hottest countreys there is all, or almost all Gold generated) who if they considered, that in cold Countreys also are; and as in *Scotland* were Gold mines in King *James* his time, would be of another mind, then to think, that the celestial Sun could penetrate, so as to heat the earth so deep as most gold lies.

I now having, in some measure, discovered what the intrinsecal, and extrinsecal heat, and the matter of Gold is: I shall next endeavour to explain, what those three principles are, *viz.* Salt, Sulphur, and Mercury, of which *Argent vive*, and Gold consist: Know therefore, that after Nature had received from the most High God the privilege of all things upon

the Monarchy of this world, ſhe began to diſtribute places, and provinces to every thing, according to its dignity; and in the firſt place did conſtitute the four elements to be the Princes of the world, and that the will of the moſt High (in whoſe will Nature is placed) might be fulfilled, ordained that they ſhould act upon one another inceſſantly. The fire therefore began to act upon the air, and produced Sulphur: The air alſo began to act upon the water and produced Mercury: the water alſo began to act upon the earth and produced Salt. Now the earth not having whereon to act, produced nothing, but became the ſubject of what was produced. So then there were produced three principles, but our ancient Philoſophers not ſo ſtrictly conſidering the matter, deſcribed only two acts of the elements, and ſo named but two principles, *viz.* Sulphur and Mercury: or elſe they were willing to be ſilent in the other, ſpeaking only to the ſons of Art.

The Sulphur therefore of Philoſophers, (which indeed is the Sulphur of metals, and of all things) is not, as many think, that common combuſtible Sulphur which is ſold in ſhops, but is another thing farr differing from that, and is incombuſtible, not burning, nor heating, but preſerving, and reſtoring all things which it is in; and it is the *Calidum Innatum* of every thing, the fire of nature, the created light, and of the nature of the Sun, and is called the Sun; ſo that whatſoever in any thing is fiery, and airy, is Sulphur, not that any thing is wholly ſulphureous, but what in it is moſt thin, and ſubtle, having the eſſence of the natural fire, and the nature of the created light, which indeed is that Sulphur which wiſe Philoſophers have in all ages with great diligence endeavoured to extract, and with its proper Mercury to fix, and ſo to perfect the great Magiſtery of nature. Now of all things in the World, there is nothing hath more of this Sulphur in it, then gold and ſilver, but eſpecially gold, inſomuch that oftentimes it is called Sulphur, (i.) becauſe Sulphur is the moſt predominant, and excellent principle in it, and being in it more then in all things beſides.

Mercury

Mercury is not here taken for common *Argent vive*; but it is the *Humidum Radicale* of every thing, that pure aqueous, unctuous, and viſcous humidity of the matter, and it is of the nature of the Moon, and it is called the Moon, and that for this reaſon, *viz.* becauſe it is humid; as alſo, becauſe it is capable of receiving the influence and light of the Sun, *viz.* Sulphur.

Salt is that fixt permanent earth which is in the center of every thing that is incorruptible, and inalterable, and it is the ſupporter and nourſe of the *Humidum Radicale*, with which it is ſtrongly mixt. Now this Salt hath in it a ſeed, *viz.* its *Calidum Innatum*, which is *Sulphur*, and its *Humidum Radicale*, which is *Mercury*; and yet theſe three are not diſtinct, or to be ſeparated, but are one Homogeneal thing, having upon a different account divers names: for in reſpect of its heat, and fiery ſubſtance, it is called *Sulphur*; in reſpect of its humidity, it is called *Mercury*; and in reſpect of its terreſtrial ſiccity, it is called *Salt*; all which are in Gold perfectly united, depurated, and fixed.

Gold therefore is moſt noble, and ſolid of all metals, of a yellow colour, compacted of principles digeſted to the utmoſt hight, and therefore fixed.

Silver is in the next place of dignity to Gold, and differs from it in digeſtion chiefly: I ſaid chiefly, becauſe there is ſome ſmall impurity beſides adhering to ſilver.

Now having given ſome ſmall account of the original matter, firſt, and ſecond, and manner of the growth of Gold, I ſhall, in the next place, ſet down ſome curioſities therein, and preparations thereof. The preparations are chiefly three, *viz. Aurum Potabile*, which is the mixtion thereof with other Liquors: Oil of Gold, which is Gold liquid by it ſelf, without the mixture of any other Liquor: and the tincture, which is the extraction of the colour thereof.

Dr. Anthony's *famous* Aurum Potabile, *and Oil of Gold.*

Diſſolve pure fine Gold in *Aqua regis*, according to art (the *Aqua regis* being made of a pound of *Aqua fortis*, and four ounces of Salt Armoniack, diſtilled together by Retort in Sand) which clear ſolution put into a large glaſs of a wide neck, and upon it pour, drop by drop, Oyl of Tartar made *per deliquium*; until the *Aqua regis*, which before was yellow, become clear, and white; for, that is a ſign that all Calx of Gold is ſetled to the bottom: then let it ſtand all night, and in the morning pour off the clear Liquor, and waſh the Calx four or five times with common Spring-water, being warmed, and dry it with a moſt gentle heat.

Note, and that well, that if the heat be too great, the Calx takes fire preſently like Gun-powder, and flies away to thy danger and loſs; therefore it is beſt to dry it in the Sun, or on a ſtone, ſtirring it diligently with a wooden ſpatle: To this Calx add half a part of the powder of Sulphur, mix them together, and in an open Crucible, let the Sulphur burn away in the fire, putting a gentle fire to it at the firſt, and in the end a moſt ſtrong fire for the ſpace of an hour, that the Calx may in ſome manner be reverberated, and become moſt ſubtle, which keep in a viol cloſe ſtopt for your uſe.

Then make a ſpirit of Urine after this manner, *viz.* Take the Urine of a healthy man, drinking Wine moderately; put it into a gourd, which you muſt ſtop cloſe, and ſet in horſe-dung for the ſpace of forty dayes; then diſtil it by Alembick in ſand, into a large Receiver, until all the humidity be diſtilled off: Rectifie this Spirit by cohobation three times, that the Spirit only may riſe: Then diſtil it in ſand, by a glaſs with a long neck, having a large Receiver annexed, and cloſed very well to it; and the ſpirit will be elevated into the top of the veſſel like Cryſtal, without any aqueous humidity accompanying of it. Let this diſtillation be continued, until all the Spirits be riſen. Theſe Cryſtals muſt be diſſolved in diſtilled rain-water, and be diſtilled as before, this muſt be done ſix times, and every time you muſt take freſh rain-water diſtilled: Then put theſe Cryſtals into a glaſs bolt-head,

bolt-head, which cloſe Hermetically, and ſet in the moderate heat of a *Balneum* for the ſpace of fifteen days, that they may be reduced into a moſt clear Liquor. To this Liquor, add an equal weight of Spirit of Wine, very well rectified, and let them be digeſted in *Balneo* the ſpace of twelve dayes, in which time they will be united: Then take the Calx of Gold aboveſaid, and pour upon it, of theſe united Spirits, as much as will cover them three fingers breadth, and digeſt them in a gentle heat, until the Liquor be tinged as red as bloud; decant off the tincture, and put on more of the aforeſaid Spirits, and do as before till all the tincture be extracted; then put all the tincted Spirits together, and digeſt them ten or twelve dayes; after which time, abſtract the Spirit with a gentle heat, and cohobate it once; and then the Calx will remain in the bottom like an Oyl as red as bloud, and of a pleaſant odour, which will be diſſolved in any Liquor: Wherefore this Oyl may be the *Succedaneum* of true Gold. If you diſtil the ſame ſolution, by Retort in ſand, there will come over, after the firſt part of the *Menſtruum*, the tincture with the other part thereof, as red as bloud, the earth which is left in the bottom of the veſſel being black, dry, ſpongious and light: The *Menſtruum* muſt be vapoured away, and the Oyl of gold will remain by it ſelf, which muſt be kept as a great treaſure; and this is Dr. *Anthony's Aurum Potabile.*

Four or eight grains of this Oil taken in what manner ſoever, wonderfully refreſheth the Spirits, and works ſeveral ways, eſpecially by ſwear.

The true Oyl of Gold.

Take an ounce of leaf-gold, diſſolve it in four ounces of the rectified water of Mercury, expreſſed page 94. digeſt them in horſe-dung the ſpace of two months; then evaporate the Mercurial water, and at the bottom you ſhall have the true Oyl of Gold, which is radically diſſolved.

Another proceſs hereof you may ſee page 89.

A Tincture of Gold.

Dissolve pure Gold in *Aqua regis*, precipitate it with the Oil of sand, into a yellow powder, which you must dulcifie with warm water, and then dry it (this will not be fired as *Aurum fulminans*). This powder is twice as heavy as the Gold that was put in, the cause of which is the salt of the flints precipitating it self with the Gold. Put this yellow powder into a Crucible, and make it glow a little, and it will be turned into the highest, and fairest purple that ever you saw; but if it stand longer, it will be brown: Then powre upon it the strongest Spirit of Salt; (for it will dissolve it better then any *Aqua regis*) on which dissolution poure on the best rectified Spirit of Wine, and digest them together, and by a long digestion, some part of the Gold will fall to the bottom, like a white snow, and may with Borax, Tartar, and Salt-Nitre be melted into a white metal as heavy as Gold, and afterwards with Antimony may recover its yellow colour again; then evaporate the Spirit of Salt, and of Wine, and the Gold Tincture remaineth at the bottom, and is of great vertue.

Another Tincture of Gold.

Take of the aforesaid yellow Calx of Gold precipitated with Oil of Sand, one part, and three or four parts of the Liquor of Sand, or of Crystals; mix them well together, and put them into a Crucible, in a gentle heat at first, that the moisture of the Oil may vapour away (which it will not do easily, because the dryness of the Sand retains the moisture thereof, so that it flyeth away like molten Allum, or Borax) when no more will vapour away, encrease your fire, till the crucible be red hot, and the mixture cease bubling; then put it into a Wind Furnace and cover it that no ashes fall into it, and make a strong fire about it for the space of an hour, and the mixture will be turned into a transparent Ruby: Then take it out, and beat it, and extract the tincture with Spirit of Wine, which will become

become like thin bloud, and that which remains undiſſolved may be melted into a white metal as the former.

Another Tincture of Gold.

Hang plates of Gold over the fume of *Argent-vive*, and they will become white, friable, and fluxil as wax. This is called the Magneſia of Gold, as ſaith *Paracelſus*; in finding out of which (ſaith he) Philoſophers, as *Thomas Aquinas*, and *Rupeſciſſa* with their followers, took a great deal of pains, but in vain, and it is a memorable ſecret, and indeed very ſingular for the melting of metals that are not eaſily fluxil. Now then Gold being thus prepared, and melted together with the Mercury, is become a brittle ſubſtance, which muſt be powdered and out of it a tincture may be drawn for the tranſmuting of metals.

Another Tincture.

Take half an ounce of pure Gold, diſſolve it in *Aqua-regis*, precipitate it with Oyl of Flints, dulcifie the Calx with warm water, and dry it, and ſo it is prepared for your work: Then take *Regulus Martis* powdered, and mix it with three parts of Salt-Nitre, both which put into a Crucible, and make them glow gently at firſt. then give a ſtrong melting fire, and then this mixture will become to be of a purple colour, which then take out, and beat to powder, and adde to three parts of this, one part of the Calx of Gold prepared as before; put them into a Wind-furnace in a ſtrong Crucible, and make them melt as a metal, ſo will the *Nitrum-antimoniatum* in the melting take the Calx of Gold to it ſelf, and diſſolve it, and the mixture will become to be of an Amethyſt colour. Let this ſtand flowing in the fire till the whole maſs be as tranſparent as a Rubine, which you may try by taking a little out and cooling of it: If the mixture do not flow well, caſt in ſome more Salt-Nitre. When it is compleatly done, caſt it forth, being flowing into a brazen-mortar, and it will be like to an oriental Rubine; then powder it before it

be cold, then put it into a Viol, and with the Spirit of Wine extract the tincture.

This is one of the beſt preparations of Gold, and of moſt excellent uſe in medicine.

Another Tincture.

Firſt make a Furnace fit for the purpoſe, which muſt be cloſe at the top, and have a Pipe to which a Recipient with a flat bottom muſt be fitted: When this Furnace is thus fitted, put in three or four grains (not above) at once, of *Aurum fulminans*, which aſſoon as the Furnace is hot, flyeth away into the Recipient through the pipe like a purple coloured fume, and is turned into a purple coloured powder, then put in three or four grains more, and do as before, till you have enough flowers of Gold (that which flyeth not away, but remaineth at the bottom, may with Borax be melted into good Gold) then take them out, and pour upon them rectified Spirit of Wine tartarized, and digeſt them in aſhes till the ſpirit be coloured blood-red, which you muſt then evaporate, and at the bottom will be a blood red tincture of no ſmall vertue.

Aurum-fulminans.

Take the pureſt Gold you can get; pour on it four times as much *Aqua-regia*; ſtop your Glaſs with a paper, and ſet it in warm aſhes, ſo will the *Aqua-regia* in an hour or two take up the Gold, and become a yellow water, if it be ſtrong enough: (be ſure that your Gold hath no Copper in it, (for then your labour will be loſt) becauſe the Copper will be precipitated with the Gold, and hinder the firing thereof) then pour on this yellow water drop by drop, pure Oyl of Tartar made *per deliquium*; ſo will the Gold be precipitated into a dark yellow powder, and the water be clear. Note, that you pour not on more Oyl of Tartar than is ſufficient for the precipitation, otherwiſe it will diſſolve part of the precipitated Gold to thy prejudice. Pour off the clear Liquor by inclination, and dulcifie the Calx with diſtilled

ſtilled Rain-water warmed. Then ſet this Calx in the Sun, or ſome warm place to dry, but take great heed, and ſpecial care, that you ſet it not in a place too hot, for it will preſently take fire, and flie away like Thunder, not without great danger to the ſtanders by, if the quantity be great. This is the common way to make *Aurum fulminans*, and it hath conſiderable difficulties in the preparation. But the beſt way is to precipitate Gold diſſolved in *Aqua-regis* by the Spirit of Salt-Armoniack, or of Urine; for by this way the Gold is made purer than by the other, and giveth a far greater crack and ſound. Note, that the Salt of the Spirits which is precipitated with the Gold muſt be waſhed away, and the Gold dulcified as before.

A few grains of this being fired, give a crack and ſound as great as a Muſket when it is diſcharged, and will blow up any thing more forcibly farr than Gunpowder, and it is a powder that will quickly and eaſily be fired.

This is of uſe for Phyſick as it is in powder, but eſpecially it is uſed in making the fore-going tincture.

To make Gold grow in a Glaſs like a tree, which is called the Golden-tree of the Philoſophers.

Take of Oyl of Sand as much as you pleaſe, pour upon it the ſame quantity of Oyl of Tartar, *per deliquium*; ſhake them well together that they be incorporated and become as one Liquor of a thin conſiſtence; then is your *Menſtruum* or Liquor prepared, Then diſſolve Gold in *Aqua-regia*, and evaporate the *Menſtruum*, and dry the Calx in the fire, but make it not too hot, for it will thereby loſe its growing quality; then take it out and break it into little bits, not into powder; put thoſe bits into the aforeſaid Liquor (that they may lye a fingers breadth the one from the other) in a very clear glaſs. Keep the Liquor from the air, and you ſhall ſee that thoſe bits of the Calx will preſently begin to grow; firſt they will ſwell, then they will put forth one or two ſtems, then divers branches and twigs ſo exactly, as that you cannot chuſe but exceedingly to wonder. This growing is real, and not imaginary only. Note, that the glaſs muſt ſtand ſtill, and not be moved.

Another Way.

Calcine fine Gold in *Aqua-regis*, that it become a Calx, which put into a Gourd-glaſs, and pour upon it good and freſh *Aqua-regia*, and the water of Gradation, ſo that they cover the Calx four fingers breadth; this *Menſtruum* abſtract in the third degree of fire until no more will aſcend. This diſtilled water pour on it again, and abſtract it as before; and this do ſo often till you ſee the Gold riſe in the Glaſs, and grow in the form of a tree, having many boughs and leaves.

To make Gold grow and be increaſed in the Earth.

Take leaves of Gold, and bury them in the Earth which looks towards the Eaſt, and let it be often ſoiled with mans urine, and doves-dung, and you ſhall ſee that in a ſhort time they will be increaſed.

The reaſon of this growth, I conceive, may be the Golds attracting that univerſal vapour and ſperm that comes from the center through the earth (as hath been ſpoken in the Anatomy of Gold) and by the heat of putrefaction of the dung purifying and aſſimilating it to it ſelf.

A remarkable obſervation upon a golden Marcaſite.

There is found a certain ſtone in *Bononia*, which ſome call a golden Marcaſite, ſome a ſolary Magnes that receives light from the Sun in the day time, and gives it forth in the dark: About this there have been much reaſoning amongſt Philoſophers, as whether light be really a body, or any kind of ſubſtance, or an accident only, and whether this ſtone had any Gold in it or no, and what it did conſiſt of. He that firſt diſcovered it, thought that he had found a thing that would tranſmute metals into Gold, (by which it appears that there ſeemed to be ſomething of Gold in it, or ſomething more glorious than Gold) but his hopes were fruſtrated by a fruitleſs labour, notwithſtanding which, I conceive, there might be ſome imma-

immature or crude Gold in it; for crude Gold is a ſubject (being there is ſome life in it) that is moſt fit to receive the influencies of the Sun, according to the unanimous conſent of all Philoſophers, and therefore is by them not only called Solary, but *Sol.* (*i.*) the Sun it ſelf.

It is prepared for the receiving of light thus: it is calcined two wayes; firſt, it is brought into a moſt ſubtle powder with a very ſtrong fire in a crucible; ſecondly, being thus brought into a powder, is made up into Cakes as big as a doller, or a piece of eight, either with common water alone, or with the white of an egge; put thoſe Cakes being dryed by themſelves, into a Winde-Furnace *S S S*, with coals, and calcine them in a moſt ſtrong fire, for the ſpace of four or five hours. When the Furnace is cold, take them out, and if they be not ſufficiently calcined the firſt time, (which is known by their giving but little light,) then reiterate the calcination after the ſame manner as before, which is ſometimes to be done thrice. That is the beſt which is made of the choiceſt ſtones that are clean, pure, and diaphanous, and gives the beſt light. With this being powdered, you may make the forms of divers Animals of what ſhapes you pleaſe, which you muſt keep in boxes, and they will receiving light from the Sun in the day time, give light in the night, or in a dark place, which light will vaniſh by degrees.

The vertues of the aforeſaid preparations of Gold.

With the aforeſaid preparations the Ancients did not only preſerve the health and ſtrength of their bodies, but alſo prolong their lives to a very old age; and not that only, but cured throughly the Epilepſie, Apoplexie, Elephantiaſis, Leproſie, Melancholy, Madneſs, the Quartain, the Gout, Dropſie, Pluriſie, all manner of Feavers, the Jaundice, *Lues-venerea*, the Wolf, Cancer, *Noli me tangere*, Aſthma, Conſumption, the Stone, ſtopping of Urine, inward Impoſtumes, and ſuch like diſeaſes, which moſt men, account incurable: For there is ſuch a potent fire lying in prepared Gold, which doth not only conſume deadly humors, but alſo renews the very marrow of

the bones, and raiſeth up the whole body of man being half dead.

They that uſe any of theſe preparations for any of the foregoing diſeaſes, muſt betake themſelves to their bed for the ſpace of two or three hours, and expect ſweating to enſue, for indeed it will ſend forth ſweat plentifully, and with eaſe, and leave no impurity or ſuperfluity in the whole body. Note, that they muſt take it for ten dayes together in appropriated Liquors.

Let young men that expect long life, take any of the aforeſaid preparations once in a month, and in the morning, but they muſt abſtain from meat and drink, till the evening of the ſame day, for in that time that matter will be digeſted into the radical humor; whereby the ſtrength of the body is wonderfully increaſed, beauty doth flouriſh moſt wonderfully, and continues till extream old age.

Let old men take it twice in a month, for by this means will their old age be freſh till the appointed time of death.

Let young women and maids take it once in a month after their *menſtrua*, for by this means they will look freſh and beautiful.

Let women that are in travel take it, and it will help and ſtrengthen them to bring forth without much pain, notwithſtanding many difficulties.

Let it be given to women that have paſt the years of their *menſtrua* once or twice in a month, and it will preſerve them very freſh, and many times cauſe their *menſtrua* to return, and make them capable again of bearing children.

It cures the Plague, and expels the matter of a Carbuncle by ſweat moſt potently:

When I ſay, that this, or it will do thus or thus, I mean, any one of the fore-named preparations, *viz.* *Aurum Potabile*, Oyls, or Tincture of Gold.

The Preparations of Silver in general.

All the ſeveral preparations of Gold may, except that of *Aurum*

rum fulminans, be applyed to ſilver; of which being thus prepared the vertues are inferiour to thoſe of Gold, yet come neerer to them than thoſe of any other matter whatſoever, or howſoever prepared.

Note, that Silver hath ſome peculiar preparations which neither Gold or any other metals are capable of.

A green Tincture of Silver.

Take fine ſilver, and diſſolve it in twice ſo much rectified Spirit of Nitre, then abſtract half of the ſaid Spirit in ſand, let it ſtand a day or two in a cold place, and much of the Silver will ſhoot into Cryſtals, and in oft doing moſt of it.

Theſe Cryſtals are very bitter, yet may be made into Pills, and taken inwardly from three grains to twelve; they purge very ſecurely, and gently, and colour the lips, tongue, and mouth black. If in this diſſolution of Silver before it be brought to Cryſtals, half ſo much Mercury be diſſolved and both ſhoot together into Cryſtals, you ſhall have a ſtone not much unlike to Allum. This purgeth ſooner, and better, and is not ſo bitter; It coloureth the nails, hair, skin, if it be diſſolved in Rain-water, with a lovely brown, red, or black, according as you put more or leſs thereof.

Take of the aforeſaid Cryſtals of Silver, mix with them a like quantity of pure Salt-peter well powdered, then put this mixture into the diſtilling veſſel expreſſed page 95. at the bottom of which muſt be powdered coals to the thickneſs of two fingers breadth; then make ſtrong fire, that the veſſel and coals be red hot, put in a dram of the aforeſaid mixture, and it will preſently ſublime in a ſilver fume, into the Recipient, which being ſetled, put in more, and ſo do till you have enough. Take out the flowers, and digeſt them in the beſt alcholizated Spirit of Wine, that thereby the Tincture may be extracted, which will be green.

A green

A green Oyl of Silver.

Take of the aboveſaid Cryſtals of Silver one part, of Spirit of Salt-Armoniack two or three parts, digeſt them together in a Glaſs with a long neck, well ſtopt, twelve or fourteen days; ſo will the Spirit of Salt-Armoniack be coloured with a very ſpecious blew colour, pour it off, and filter it: then put it into a ſmall Retort, and draw off moſt of the Spirit of Armoniack, and there will remain in the bottom a graſs-green liquor: Then draw off all the Spirit, and there will remain in the bottom a ſalt, which may be purified with Spirit of Wine, or be put into a Retort, and then there will diſtil off a ſubtle Spirit, and a ſharp Oyl.

This green Liquor is of great uſe for the gilding of all things preſently.

If you take common Rain-water diſtilled, and diſſolve, and digeſt the aforeſaid Cryſtals of ſilver for a few days, you ſhall after the appearance of divers colours, find an eſſence at the bottom, not ſo bitter as the former, but ſweet, and in this Liquor may all metals in a gentle heat by long digeſtion be maturated, and made fit for medicine; but note, that they muſt firſt be reduced into Salts, for then they are no more dead bodies, but by this preparation have obtained a new life, and are the metals of Philoſophers.

To make Oyl of Silver per deliquium.

Take of the aforeſaid Salts, or Cryſtals of Silver, and reverberate them in a very gentle fire, then put them into a cellar on a Marble-ſtone, and they will in two months time be reſolved into a Liquor.

To make a Liquor of Silver, that ſhall make the Glaſs wherein it is, ſo exceeding cold, that no man is able for the coldneſs thereof, to hold it in his hand any long time.

Take the aforeſaid Salt of Silver, pour upon it the Spirit of Salt Armoniack and diſſolve it throughly, and it will do as aboveſaid.

With a glaſs being full of this Liquor, you may condenſe the air into water, in the heat of the Summer; as alſo freeze water.

To make ſilver as white as ſnow.

Take of the calx of ſilver made by the diſſolution of it in *Aqua fortis*, dulcifie it, and boyl it in a Lixivium made of Sope-aſhes, and it will be as white as any ſnow.

To make the ſilver tree of the Philoſophers.

Take four ounces of *Aqua fortis*, in which diſſolve an ounce of fine ſilver; then take two ounces of *Aqua fortis*, in which is diſſolved half an ounce of *Argent vive*; mix theſe two Liquors together in a clear glaſs with a pint of pure water, ſtop the glaſs very cloſe, and you ſhall ſee day after day, a tree to grow by little and little, which is wonderful pleaſant to behold.

I Have ſet down ſeveral vulgar preparations of Gold and Silver, and of almoſt all things elſe, I ſhall now crave leave to give an account of ſome Philoſophical preparations of the Philoſophers Gold and Silver: For indeed the Art of preparing of them is the true Alchymy, in compariſon of which all the Chymical diſcoveries are but abortives, and found out by accident, *viz.* by endeavouring after this. I would not have the world believe that I pretend to the underſtanding of them; yet I would have them know that I am not incredulous as touching the poſſibility of that great Philoſophical work, which many have ſo much laboured after, and may have found. To me there is

nothing in the world seems more possible, and whosoever shall without prejudice, read over the Book, entituled *The New Light of Alchymie*, shall, almost, whether he will or no, (unless he resolves not to believe any thing though never so credible) be convinced of the possibility of it. What unworthiness God saw, in Gold, more then in other things, that he should deny the seed of Multiplication (which is the perfection of the creatures) to it, and give it to all things besides, seems to me to be a question, as hard to be resolved, yea, and harder, then the finding out the Elixir it self; in the discovering of which, the greatest difficulty is, not to be convinced of the easiness thereof. If the preparations were difficult, many more would find it out then do (saith *Sandivogius*); for they cast themselves upon most difficult operations, and are very subtle in difficult discoveries, which the Philosophers never dreamed of: Nay, saith the aforenamed Author, if *Hermes* himself were now living, together with subtle-witted *Geber*, and most profound *Raimund Lullie*, they would be accounted, by our Chymists, not for Philosophers, but rather for learners: They were ignorant of those so many Distillations, so many Circulations, so many Calcinations, and so many other innumerable Operations of Artists now a dayes used, which indeed men of this age did find out and invented out of their books: Yet there is one thing wanting to us which they did, *viz.* to know how to make the Philosophers stone, or Physical tincture; the processes of which, according to some Philosophers, are these.

The

The Proceſs of the Elixir, according to Paracelſus.

TAke the mineral *Electrum*, being immature, and made very ſubtle, put it into its own ſphear, that the impurities and ſuperfluities may be waſhed away; then purge it, as much as poſſibly you can, with *Stibium*, after the Alchymiſtical way, leſt by its impurity thou ſuffer prejudice: Then reſolve it in the ſtomach of an Eſtridge, which is brought forth in the earth, and through the ſharpneſs of the Eagle, is comfortated in its vertue.

Now when the *Electrum* is conſumed, and hath, after its ſolution, received the colour of a Mary-gold, do not forget to reduce it into a ſpiritual tranſparent eſſence, which is like to true Amber; then add half ſo much as the *Electrum* did weigh before its preparation, of the extended Eagle, and oftentimes abſtract from it the ſtomach of the Eſtridge, and by this means the *Electrum* will be made more ſpiritual: Now, when the ſtomach of the Eſtridge is wearied with labour, it will be neceſſary to refreſh it, and alwayes to abſtract it. Laſtly, when it hath again loſt its ſharpneſs, add the Tartarizated Quinteſſence; yet ſo, that it be ſpoyled of its redneſs the height of four fingers, and that paſs over with it; this do ſo often till it be of it ſelf white, and when it is enough, and thou ſeeſt that ſign, ſublime it. So will the *Electrum* be converted into the whiteneſs of an exalted Eagle, and, with a little more labour, be tranſmuted into deep redneſs, and then it is fit for Medicine.

The Proceſs of the Elixir, according to Divi Leſchi Genus Amo.

TAke of our earth through eleaven degrees, eleaven grains; of our gold, and not of the vulgar, one grain; of our lune, not of the vulgar, grains two; but be thou admoniſhed that thou take not the Gold, and Silver of the vulgar, for they are dead, but take ours which are living; then put them into our fire, and there will thence be made a dry Liquor: Firſt the earth will be reſolved into water, which is called the Mercury of Philoſophers, and in that water it will reſolve the bodies of the Sun, and Moon, and conſume them that there remain but the tenth part, with one part, and this will be the *Humidum Radicale Metallicum.* Then take the water of the Salt Nitre of our earth, in which there is a living ſtream, if thou diggeſt the pit knee deep; take therefore the water of it, but take it clear, and ſet over it that *Humidum Radicale;* and put it over the fire of putrefaction and generation, but not ſuch as was that in the firſt operation. Govern all things with a great deal of diſcretion, until there appear colours like to the tail of a Peacock: govern it by digeſting of it, and be not weary till theſe colours ceaſe, and there appear throughout the whole, a green colour; and ſo of the reſt: and which thou ſhalt ſee in the bottom, aſhes of a fiery colour; and the water almoſt red; open the veſſel, dip in a feather, and ſmeer over ſome iron with it if it tinge, have in readineſs that water which is the *Menſtruum* of the world (out of the ſphear of the Moon ſo often rectified, until it can calcine gold) put in ſo much of that water as was the cold air, which went in, boyl it again with the former fire until it tinge again.

The

The Proceſs of the Philoſophers-Stone, according to Pontanus.

TAke the matter, and grind it with a Phyſical contrition, as diligently as may be, then ſet it upon the fire, and let the proportion of fire be known, *viz.* that it only ſtir up the matter; and in a ſhort time, that fire, without any other laying on of hands, will accompliſh the whole work, becauſe it will putrefie, corrupt, generate and perfect, and make to appear the three principal colours, black, white, and red: And by the means of our fire, the medicine will be multiplyed, if it be joyned with the crude matter, not only in quantity but alſo in vertue: Withal, they might therefore ſearch out this fire (which is mineral, equal, continual, vapours not away, except it be too much ſtirred up; partakes of Sulphur, is taken from elſewhere then from the matter; putteth down all things, diſſolveth, congealeth, and calcines, and is artificial to find out, and that by a compendious, and near way, without any coſt, at leaſt very ſmall, is not tranſmuted with the matter, becauſe it is not of the matter) and thou ſhalt attain thy wiſh, becauſe it doth the whole work, and is the key of the Philoſophers, which they never revealed.

The Smaragdine table of Hermes *from whence all Alchymie did ariſe.*

TRue, without all falſity; certain, and moſt true. That which is inferiour, is as that which is ſuperiour; and that which is ſuperiour, is as that which is inferiour, for the accompliſhing of the miracles of one thing. And as all

things were from one, by the mediation of one; ſo all things have proceeded from this one thing by adaptation: The Father thereof, is the Sun; and the Mother thereof, the Moon; the Wind carryed it in its belly; the Nurſe thereof, is the Earth.

The Father of all the perfection of the whole world is this: The vertue thereof is entire, if it be turned into earth. Thou ſhalt ſeparate the earth from the fire, the ſubtle from the thick, ſweetly, with a great deal of judgement. It aſcends from the earth up to heaven, and again, deſcends down to the earth, and receives the powers of ſuperiours, and inferiours. So thou haſt the glory of the whole world: Therefore let all obſcurity fly from thee. This is the ſtrong fortitude of the whole fortitude, becauſe it ſhall overcome every thing that is ſubtle, and penetrate every ſolid thing, as the world is created: Hence ſhall wonderful adaptations be, whereof this is the manner; wherefore I am called *Hermes Triſmegiſtus*, having three parts of the Philoſophy of the whole world. It is compleat, what I have ſpoken of the operation of the Sun.

Of

Of SUBLIMATION.

BOOK VII.

What Sublimation is.

1. *Sublimation* is the extraction of the pure, subtile, dry parts, (from the impure, gross, and feculent matter) which, by the vertue of the fire, is elevated on high, sticking to the sides of the vessels, dry like Atoms; and therein it differs from *Distillation*.

2. *Sublimation* is an operation, whereby the vaporous body, or matter, is forced to rise by the strength of the fire, and then condensed by the Ambient cold.

It is called *Sublimation*, from the manner of the Operation, being opposite to *Precipitation*.

What Furnaces are necessary in this Work.

As to the variety of Furnaces useful in this Art, you have them more generally described in the former part; Two whereof are particularly useful in Sublimation, viz.

An Iron Vessel in form of either Pot or Kettle (as to the Artist shall seem good) well plated in a Furnace of brick or stone, with convenient Registers; for the regular increase or decrease of

of the fire, being very neceſſary in this Operation; in which veſſel you may uſe either Sand or Aſhes to place your Sublimatory in, according as your matter requires.

Alſo, A Naked fire; that is, when the Veſſel or Sublimatory containing the matter to be ſublimed, ſtandeth in the naked fire, without either Sand or Aſhes.

For in Sublimation are required various degrees of fire, according to the diverſity of Spirits to be Sublimed: As ſaith *Geber*, Some Sublimations are performed by a very ſtrong fire, as Marchaſites, Magneſia, Tutia, Antimony, *&c.* Some by a more moderate fire, as Mercury, Arſenick, *&c.* Some by a more gentle heat, as Sulphur, *&c.*

Alſo, there are ſeveral Sublimations performed, by caſting the matter to be ſublimed into the naked fire: Thus are made the flowers of Mettals, and ſtubborn robuſt Minerals, as hereafter appeareth.

What Veſſels are to be uſed in Sublimation.

They are made either of Glaſs or Earth; earthen Veſſels are moſt commonly uſed, by reaſon that they are cheaper and endure the fire better, and ſerve very well for common operations; for in Sublimation, uſually, there is no neceſſity of glaſs of ſuch Veſſels that retain the ſpirits, but it is ſufficient that they be ſtrong and made of good earth, that will endure the fire well, they may be either glazed within, or not, according as the matter to be ſublimed is either Liquefiable or not:

But in ſelect operations, where the matter is either precious, or very ſubtile and ſpiritual, the glaſs Sublimatories are to be preferred, and are much more uſed by good Artiſts, and in choice preperations, than the other.

The form of the Veſſels alſo vary, according to the matter to be Sublimed, they are ſometimes high, and ſometimes low, as the matter is more or leſs volatile; for if it be more Volatile, the higher Sublimatories are to be uſed; if leſs Volatile, then lower. Sometimes many Veſſels are to be uſed in Sublimation, the one ſet over the other, and all of them open at the top, ſave only the uppermoſt, which muſt be cloſed,

and

and hath a pipe at the ſide, that if any moiſture do ariſe it may diſtil.

Many Veſſels are uſed to this end, that the more pure and volatile may aſcend into the higheſt, the leſs pure into the lower, and that the groſs and impure may remain in the bottom.

Sometimes there is only a bare Sublimatory uſed, with only a piece of Lute at the top, with a ſmall vent to preſerve the Sublimatory from breaking; ſometimes there is a blind-head added to receive the more volatile part of the matter ſublimed. Sometimes an Alembick-head with its Receiver is added at the top of the Sublimatory, not only to preſerve the Spirits that diſtil before the Sublimation, but to receive in the neck of the head the matter ſublimed, becauſe it cannot eaſily ſtick to the ſides of the veſſel, as in Sulphur, *&c.*

Sublimation is thus performed.

Firſt prepare the matter that is to be ſublimed, either by waſhing, calcining, burning, boyling, or the like, as the matter requires; then either by it ſelf, or mixed with other materials, put it in your Sublimatory made round or flat in the bottom, that one third part thereof only may be full, which place, either in your Sand-Furnace, that the ſand may be three fingers thick, in the bottom and ſides of the Sublimatory, or in the naked fire; then faſten with good lute the head or blind-head, (with a hole on the ſide): and ſo lute it that no ſpirits may breath out, ſave only at the hole for that purpoſe.

Then give fire by degrees, and when you perceive that all the moiſture is vapoured forth at the hole in the head (which may be known by holding thereto, either a piece of Glaſs, or poliſht Steel, to ſee whether it moiſtens the ſame or not); then lute faſt the ſame hole, that the dry ſpirits exhale not; then increaſe the fire until you have elevated all the ſpirits, and perfected the Sublimation.

How Sulphur is ſublimed.

Take the beſt and cleareſt yellow Sulphur ℔ij. of common Salt and Hungarian Vitriol, a little calcined, of each half a pound; powder them all a part, and mix them well together; then put them into your Sublimatory, and put on its head; add to it fire of the firſt degree, until all its moiſture be vapoured away; then cloſe the pipe above, and proceed with the fire by degrees, until all the Sulphur be ſublimed very ſubtle. This Sulphur (Chymically called the Flowers of Sulphur) take out of the Alembick, and reiterate the ſaid ſublimation, the ſecond or third time, every time adding a fourth part of ſalt and Vitriol, calcined as before, and then have you very fine flowers of Sulphur, reſiſting many diſeaſes. *Rhenanus.*

Another way thus.

Mix equal parts of Sulphur and Colcothar of Vitriol perfectly rubified and dryed, put it to ſublime (which operation is performed in eight hours, neither is need of any very great fire); then take the flowers ſublimed, and ſublime them again with Sugar-Candie only, to the end that it may the better cure the Aſthma, and other diſeaſes of the Lungs: Neither need you fear here that the melting of the Sulphur, will hinder the ſublimation; for whatſoever way Sulphur is ſublimed, either by it ſelf, or with addition, it alwayes melteth.

Another way to ſublime Sulphur.

Take Sulphur one part, and common Salt two parts, and put it to ſublime in a ſublimatory well luted in the naked fire, but with a moderate heat: this way are ſublimed the faireſt flowers of Sulphur, without the reiteration of ſublimation.

Another

Another way thus.

Take the yelloweſt Sulphur ℔ j. of common Salt melted in a Crucible, then caſt into a Mortar, and when it is cold powdered, half a pound, of Hungarian Vitriol purified and calcined, half a pound; powder them and mix them together, and ſet them to ſublime in Sand, put thereon a large head with its Receiver, but let not the ſand be too high, leaſt the heat thereof melt the flowers in the head; give at firſt gentle fire, after three hours the phlegm begins to diſtil, and that laſts about four or five hours; Then increaſe the fire, until the bottom of the Veſſel containing the ſand be red hot: The flowers are at ſeveral times to be taken out of the head, but you muſt alwayes fit a Paper to preſerve them from falling into the ſand, whileſt you remove the head, and alſo ſtop the mouth of the Sublimatory, leſt the Sulphur take fire from the Air, which otherwiſe would happen; then put on the head again and proceed, and let the fire continue ten hours; then let it cool, and add the flowers in the head to the former. The *Caput Mortuum* is porous and brittle, if you lay it on hot coals, and it will not burn, then is all that is good ſublimed.

Mix theſe flowers again with other Salt and Vitriol in the ſame proportion, and proceed as before; ſo do the third time: the oftner you reiterate the ſame, the Flowers do acquire the greater tenuity, and are the more pure; but then you will have the fewer flowers, for of three pounds, three times ſublimed, you have at laſt but 20. ounces.

To Sublime the Flowers of Benjamin.

Take Benjamin and bruiſe it groſly, and put it into a Sublimatory; then cloſe the top thereof with a double Paper, rolled about like *Hypocrates* his ſleeve, and afterwards give fire by degrees, till it ſublimeth; then have you the pure ſnow-white flowers, which are no other than the ſweet eſſential ſalt, which oftentimes collect.

Their Use.

They are effectual againſt the Aſthma, and all diſeaſes of the Lungs; the doſe is half a ſcruple in Liquors, or fit Syrups: But they are a Topick remedy againſt the Pimples and redneſs of the face.

To Sublime Sal-Armoniack.

Take common Salt as much as you think fit, and fill a Calcining Pot therewith, and cover it, leaſt coals and aſhes fall thereunto; ſet the pot on the ground, and cover the ſame with coals not burning; then kindle the coals, till they be all on fire, and the pot be red hot; when it is cold, then have you the Salt calcined and prepared.

Then take Sal-Armoniack beaten to powder one pound, ſcales or filings of Iron one pound, (or ten ounces;) mix them and ſublime them with a ſtrong fire; then take that which is ſublimed, (and if you pleaſe, ſublime it again *per ſe*) and it is now fit to be ſublimed with the Salt prepared.

Therefore take what Sal-Armoniack you have ſublimed, and twelve ounces of the Salt calcined; mix them well together, and put them to ſublime; which laſt ſublimation repeat five or ſeven times, every time adding new Salt calcined and prepared, and then have you Sal-Armoniack ſublimed, fit for any uſe where it is to be uſed.

Its Use.

Sal-Armoniack thus prepared is of infinite vertues, aſwell that it belongeth to the preparation of other Medicines, as that it hath its ſingular vertues in ſeveral diſeaſes.

1. With this Salt is extracted the Sulphur of *Mars*, *Venus*, Antimony, and other Metals, Stones and Minerals.

2. A Water is made thereof on a Marble-ſtone in a cellar uſeful for the Reſtauration of Metals.

3. This

3. This Salt ſublimed is of great uſe in reducing Metals into Mercury-vive.

4. In all Feavers it is a principal Medicine, for it radically expelleth Feavers, and is a ſingular good ſudorifick: if it be not ſufficient, at firſt it is to be often repeated, and the ſick ſhall be freed from the Feaver; the doſe is from 9. grains to 16. grains.

5. For a weak ſtomack, appetite loſt, loathing of food; give to Children 3. grains, to a weak conſtitution 5. grains, to thoſe that are of full age 7 or 9 grains; every day for nine dayes, and it will a little provoke ſweat, and the ſick ſhall be perfectly cured.

The Sublimation of Mercury.

Take Mercury, (purged with Salt prepared, and Vinegar, and preſſed through Leather) Vitriol calcined till it be red, Salt prepared of each of them one pound; Salt-Petre four ounces; grind them and mingle them together in a ſtone-mortar with a little Vinegar, ſo long until the Mercury appear no more alive; when they are all well mixed, put them in a ſublimatory well luted; on which place an Alembick-head with a ſhort Pipe; give fire by degrees, according to Art, for 8. or 10. hours; the *Aqua-fortis* that diſtills over let that be kept, for the ſecond ſublimation; to one pound of Mercury ſublimed, add of the Salt prepared twelve ounces, and of the calcined Vitriol four ounces; for the third Sublimation, let it be done with Salt alone.

A more perfect way of Subliming Mercury.

Take Mercury of Cinnabar, revived according to Art one pound; diſſolve it in common *Aqua-fortis*; then draw off the *Aqua-fortis* by Diſtillation, or evaporate it till it be dry; then take the Mercury precipitated, and pound it very well in a ſtone-mortar, (not in a metalline) with an equal quantity of Salt decrepitated, and of Vitriol calcined till it be white; then when all are well mingled together, put them into a Glaſs-Sublimatory, with an Alembick-head thereon, or elſe into a

very ſtrong body with a large neck, that the firſt Fumes may the better go out (otherwiſe the body may be in danger, if the Regiment of the fire be not cautiouſly and prudently obſerved); give fire by degrees until the neck of the body begin to be white; then cloſe up the mouth thereof with Paper, and increaſe the fire for five, or ſix hours; and by this means have you a very beautiful Cryſtaline ſublimed Mercury, which being cold, you may ſeperate from the glaſs, and it is much more fit for Medicine than the former.

To make Mercurius Dulcis.

Take purified Mercury, or the Mercury of Cinnaber revived, ſix ounces, Mercury ſublimed as before, powdered in a Marble-Mortar 8. ounces: Grind them together, adding by little and little the crude Mercury to the Mercury ſublimate, mixing therewith a little diſtilled Vinegar, until no live grains of Mercury appear, and it become of a blackiſh colour; then put it to ſublime in a Sublimatory in aſhes or ſand (the aſhes or ſand being but a little above the matter) for five or ſix hours: when the Sublimatory is cold, cut the Glaſs about the place between the matter ſublimed, and the fæces with an Iron-ring red hot, & take out the matter ſublimed, and powder it; and ſublime it again without addition, (often ſublimation add much to its purification) ſo have you it ſufficiently prepared for its happy aſwell internal as external effects.

Its Vertues.

This Sublimate is the Panchymagogon or Panacea of *Quercitane*, which he reduced into Pills, and were then called the Pills of *Mounſieur de la Violette*, and were very much in uſe, eſpecially in the French-Pox. It is given in all diſeaſes, and alſo to prevent diſeaſes at all times.

Its doſe is from 12. grains to 20. or 30 grains, made up with 4. or 5. grains, of Scammony rightly prepared, or it may be mixed with any other purging medicine; and formed into one or more Pills.

The

The beſt way to prepare Mercury from Metals for the foreſaid Proceſs.

Take Crude Antimony 2. pound, Tin and Lead, of each three ounces, firſt melt the metals together, they being melted, add the Antimony by degrees, and ſo let all flow together; then add of pulveriſed Tartar 12. ounces, of Salt Peter 8. ounces; mix theſe together, and caſt this mixture by little and little upon the melted matter; which done, take it out of the fire, and you ſhall find in the bottom 8. or 10. ounces of *Regulus*, which melt again by its ſelf, and you ſhall have a *Regulus* impregnated with the qualities of Saturn and Jupiter; you may alſo inſtead of Tin and Lead, add Silver, Copper, and a little *Sel*: To which *Regulus* add of Mercury ſublimate 2. parts, and you ſhall diſtil by Retort a Quick Mercury, for the Panacea aforeſaid; there will alſo come forth a certain buttery matter, very fit to make *Mercurius vitæ* thereof.

Another Way.

Make *Regulus* the common way with Iron, whereof take one pound and a half; melt it in a crucible, and add thereto ſix drams of Copper, 2. ounces of Tin, 2. ounces and a half of Lead, Silver and Gold of each one ounce, and ſo make an *Electrum*.

Take one part of that *Electrum*, and two parts of Mercury ſublimed; diſtil it by Retort according to Art, and ſo have you a great quantity of quick Mercury, to make the foreſaid Panacea, and Univerſal Medicine; out of the Butter much whereof alſo is diſtilled, you make a very excellent *Mercurius vitæ*, as in the former part of this Book is deſcribed.

To prepare the Manna of Mercury, or the white Eagle.

Take purified Mercury, and diſſolve it in *Aqua-fortis*, then precipitate it with Sea (or Sea-Salt) water, which precipitate diſtil in a body in Sand, increaſing the fire, till at laſt the Mercury ſublime

to

to the ſides of the Veſſel; when it is cold throw away the feces in the bottom, and take that which is ſublimed, and diſſolve it and diſtil it as before, and then have you the Cæleſtial Eagle whiter than Snow, which you may waſh in Roſe-water, or other Cordial water: It is of very great uſe in Veneral diſtempers.

Its doſe is from 10, to 15 grains, and purgeth only downwards.

Mercurius Sublimatus *Eſſentified.*

Melt an ounce of Gold (purified by ſolution in *Aqua-Regia*,) with a like quantity of *Regulus Martis Stellatus*; then when they are cold, powder them very ſubtilly in an Iron-Mortar, and make an Amalgama with ſix ounces of Mercury, ſeven times ſublimed, and ſo often revived, which put in a little Retort, and ſet it in Sand, and give a moderate fire between the ſecond and third degree for three dayes; which being ended, diſtil it with a gentle fire of ſuppreſſion, and add thereto a Receiver, half full of water, ſo the Mercury bringeth over with it part of the Gold, and is animated by the Tincture of the *Stellate Regulus*, which Mercury-*vive* is then to be ground with Mercury ſeven times ſublimed, and ſublimed into the Celeſtial Eagle as aforeſaid; whoſe effects ſo farr exceed the effects of the ordinary preparation, as the Philoſophical operation is more laborious than the ordinary.

The Imperial Eagle.

Take Mercury ſeven times ſublimed, Mercury of Cinnabar revived of each four ounces; mix them and grind them together, until none of the Mercury appear quick; then put it in a large veſſel, and pour on it two pounds of common water, or thereabouts, which ſtir often together, and after it hath ſtood 12. hours, decant the water from the matter, and keep it by it ſelf, and pour thereon more water 12. times, obſerving the ſame method as before; then dry the powder in the bottom of the veſſel, and ſublime it three or four times, to wit, until no

no grain of the Mercury aſcend quick, which in every Sublimation ought to be ſeparated.

Its doſe is to 10. grains, it purgeth very eaſily, yea the next day after the taking thereof: Its effectual in all venereal diſeaſes.

The Diaphoretick Ruby of Auripigmentum.

Take of the beſt and cleareſt *Auripigmentum* one ounce, grind it into a very ſubtle powder, and ſublime it in a Sublimatory with a ſtrong fire, until the bottom of the veſſel be red hot, and you ſhall have in half an hour moſt beautiful Rubies ſublimed about the neck of the Veſſel.

Its Uſe.

They are given from ſix grains to eight grains in broth or Conſerve of Ginger, to provoke ſweat in Venerial Diſeaſes, the Scab, and ſuch like.

The ſame Rubies, ground with an equal weight of Flowers of Sulphur, and digeſted in a bolt-head in ſand or aſhes in a fire of the ſecond degree for 18. or 20. do wonderfully dry up Rheumes.

Its doſe is from 8. to 12. grains, in the diſeaſes of the Lungs given in Conſerve of Roſes.

The ſame powder alſo moveth ſweat.

Another Diaphoretick Ruby of Arſenick.

Sublime Arſenick in a body, twice or thrice in Sand, for five or ſix hours, until it ariſe purely Cryſtalline, always caſting away the light powder, that ſticks like flower about the neck of the body, for that is the poyſonous part of the Arſenick; then powder the Cryſtaline part, and well mix it with as much of the flowers of Sulphur, and ſublime them together into a red maſs, which is a ſpecifick Remedy in the diſeaſes of the Lungs.

Its Use.

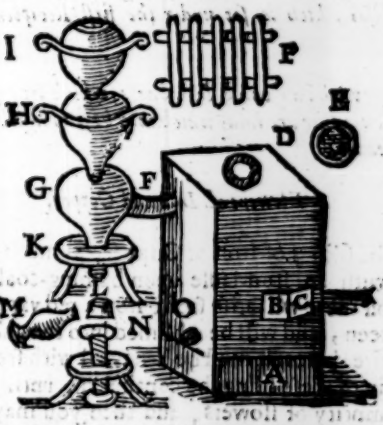
Within the body it is given from six grains to eight grains to move sweat: Outwardly used it cureth all Ulcers, malignant and difficult to be cured.

How Minerals and Metals may be reduced into Flowers, and of their vertues.

Hitherto the flowers of Metals, and Minerals have not been in use, excepting the flowers of Antimony, and Sulphur, which are easily sublimed: for Chymists have not dared to attempt the sublimation of other metals, and fixed minerals, being content with the solution of them with *Aqua-fortis*, and corrosive waters, precipitating them with the liquor of the Salt of Tartar, and afterward edulcorating, and drying them; and being so prepared, they have called them their flowers: but by which flowers I understand the same matter which is by the help of fire without the addition of any other thing sublimed, and turned into a most subtle powder, not to be perceived by the teeth or eyes, which indeed is (in my judgment) to be accounted for the true flowers; when as the flowers which others make are more corporeal, and cannot be so well edulcorated, but retain some salness in them, as may be perceived by the increase of their weight, and therefore hurtful to the eyes, and other parts.

But our flowers being by the force of the fire sublimed by themselves, are not only without salness, but are also so subtle, that being taken inwardly presently operate, and put forth their powers, *viz.* according to the pleasure of the Physician. Neither is their preparation so costly as the others are.

Metals also, and minerals are maturated, and amended in their sublimation, that they may be the more safely taken; but in other preparations they are rather destroyed, and corrupted; as experience witnesseth: how these kind of flowers are to be made I shall now teach, and indeed, of each meral by it self, whereby the Artist in the preparation cannot err, and first thus.



A, *Signifies the Ash-hole, which must be as wide as the Furnace, and alwayes open that the fire may burn the stronger.*

B, *The middle hole of the Furnace for the putting in of coals.*

C, *The stopple made of stone.*

D, *The upper hole of the Furnace with a false bottom wherein sand lyeth, which is there laid that the cover may lie the closer, and keep in the fumes the better.*

E, *The Cover, which must presently be clapt on, assoon as the matter to be distilled is put in.*

F, *The pipe which goeth out of the Furnace, and to which the Receiver is fitted.*

G, *The first Recipient for flowers.*

H, *The second.*

I, *The third.*

K, *A Stool whereon the first Recipient resteth, in the midst whereof is a hole, through which goeth the neck of the Recipient to which another glass is fitted.*

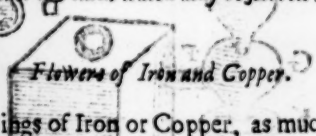
L, *The glass fitted to the Recipient for the uniting the Spirits that drop down.*

M, *Another Recipient united to the former Glass, and into which the united Spirits do run.*

N, *A stool through the middle whereof goeth a screw for the raising of that glass, which is set under the first Recipient, higher, or lower.*

O,

P, *The Grate with two thick Iron-barrs, which lie fast, upon which four or five thinner are laid, which may be stirred when the Furnace is made clean.*



Flowers of Iron and Copper.

Take of the filings of Iron or Copper, as much as you please, cast them with an Iron-ladle upon burning-coals, *viz.* scatteringly, and there will arise from Iron a red yappur, but from Copper a green, and will be sublimed into the sublimatory vessels. As the fire abates, it must be renewed with fresh coals, and the casting in of these filings be continued, until you have got a sufficient quantity of flowers, and then you may let all cool: This being done, take off the sublimatory vessels; take out the flowers, and keep them, for they are very good if they are mixed with Unguents, and Emplaisters: and being used inwardly cause vomiting; therefore they are better in Chirurgery, where scarce any thing is to be compared to them. Copper being dissolved in Spirit of Salt, and precipitated with Oyl of Vitriol, edulcorated, dryed, and sublimed, yields flowers, which being in the air resolved into a green balsom, is most useful in wounds and old putrid ulcers, and is a most pretious treasure.

Flowers of Lead and Tin.

You need not reduce these metals into small crums, it is sufficient if they be cast in piece by piece, but then you must under the grate put an earthen platter glazed, and filled with water, to gather that which flows down melted, which is to be taken out, and cast again into the fire, and this so often until all the metal be turned into flowers, which afterwards are again, the vessels being cold, to be taken out, as hath been said of the flowers of

Mars and *Venus*. And these flowers are most excellent, being mixed with Plaisters and Oyntments in old and green wounds, for they have a greater power to dry, then metals calcined, as experience can testifie.

Of Mercury.

This is easily reduced into flowers, because it is very volatile, but not for the aforesaid reason, because it leaps in the fire, and seeks to descend. And if you desire to have the flowers thereof, mix it first with Sulphur that you may pulverize it, and cast it in mortified. And if you cast into a red hot Crucible set in the furnace, a little quick Mercury, *viz.* by times with a ladle, presently it will fly out, and some part thereof will be resolved into an acid water, which is to be preferred before the flowers in my judgment; but the rest of the Mercury drops into a Receiver. But here are required Glass-vessels, because the aforesaid water is lost in earthen. And this water without doubt doth something in Alchymie: It is also good being applyed outwardly, in the scab, and venereal ulcers.

The Flowers of Zinck.

It is a wonderful metal, and is found in the spagyrical Anatomy to be meer Sulphur, golden, and immature. Being put upon burning coals doth suddenly fly away wholly; it is inflamed also, and partly burns like common Sulphur, with a flame of another colour, *viz.* golden, purple: and yields most gallant white, and light flowers.

The Use.

Being given from 4. 5. 6. grains to 12. they provoke sweat wonderfully, and sometimes vomit, and stools according to the offending matter. The vertues thereof being externally used are also wonderful, for there are not found better flowers; for they do not only speedily consolidate fresh wounds, but also old, such as alwayes drop water, in which cases they excel all other medi-

medicaments: For they are of such dryness, which hath joyned with it a consolidating vertue, as that they do even things incredible. They may be used divers wayes, as to be strewed by themselves, putting over them a stiptick Plaister, or being brought into an Unguent with Honey to be put into wounds; which Unguents in deep wounds may be boyled to a hardness for the making of small Suppositories, which are to be put into the wounds, which must afterwards be covered with some Plaister, and preserved from the air: Being applyed after this manner they cure fundamentally, being mixed with Plaisters also they do wonderful things.

If they be mixed with Rose, or Rain-water, so as to be united together, and afterwards some of this mixture be sometimes every day dropt into red eyes that water, yielding not to other ophthalmicks, do restore, and heal them.

These flowers being taken up in lint, and strewed upon those places of Children that are galled with their urine (those places being first washed with water) heal them quickly. They heal also quickly an excoriation which is contracted by lying long in any sickness, and is very painful, if they be strewed thereon.

To make Metallical Spirits and Flores by the help of Salt-Nitre and Linnen-cloth.

If metals be dissolved in their appropriated Menstruums, and in the solution (wherein a due proportion of Salt-Nitre must be dissolved) fine linnen rags be dipt and dryed, you have a prepared metal, which may be kindled, and (as it was mentioned above concerning the saw-dust) through the burning away and consuming of their superfluous Sulphur, the mercurial substance of the metal is manifested: And after the distillation is ended, you will find a singular purified Calx, which by rubbing coloureth other metals, as that of Gold doth gild Silver, that of Silver over-silvereth Copper, and Copper-Calx maketh Iron look like Copper, *&c.* which coloring, though it cannot bring any great profit, yet at least for to shew the possibility, I thought it not amiss to describe it:

and

and perchance ſomething more may be hid in it, which is not given to every one to know.

To make the Flowers of Antimony according to Glauber.

Take of Crude Antimony powdered as much as you pleaſe; and firſt make your Furnace red-hot; then caſt in at once a pound of Antimony, or thereabouts, *viz.* ſcatteringly upon the coals; and preſently it will flow, and mixed with the coals by the force of the fire will be ſublimed through the air, into Receivers like a cloud, which will there be coagulated into white flowers. Note, that when the firſt coals are burnt up, more muſt be put in to continue the ſublimation, and thoſe muſt be firſt kindled before they are put in, leſt the flowers be by the duſt of the coals ariſing together with the flowers diſcoloured, and contract thence a gray colour: but it matters not if you will not uſe them by themſelves to provoke vomiting, becauſe there is no danger thereby, for that colour comes only from the ſmoak of coals, wherefore you need not be afraid of them: But let him that diſlikes this colour, firſt kindle the coals before he put them into the Furnace, and then he ſhall have white flowers. Alſo you muſt not ſhut the middle hole through which the coals, and Antimony are caſt in, that thereby the fire may burn the more freely: for elſe the flowers of the ſuperior pots will be yellow and red, by reaſon of the Sulphur of the Antimony, which is ſublimed higher than the *regulus*. Now you may by this way make a pound of the flowers with 3, 4, 5. pound of coals. It is little that goes away from the Antimony, *viz.* the combuſtible Sulphur, which is burnt, all the reſt going into flowers. You muſt have a care to provide a ſufficient quantity of ſubliming pots, by reaſon that a large ſpace is required for the ſublimation of the flowers.

The flowers that are prepared after this way are ſold at a lower rate, ſo that one pound thereof is cheaper, than half an ounce of thoſe that are made after the other manner: Alſo they are ſafer, as being made with an open and free flame of the fire, for they do not provoke vomit ſo vehemently;

more-

moreover the flowers of the lower pots are not vomiting, but diaphoretical, as if they had been prepared with Nitre, for thus they are corrected by the fire; And by this way at one and the same operation divers flowers of divers operations may be made for the flowers of the lower; pots are diaphoretical, of the middle a little vomitive, but of the uppermost vehemently vomitive. For by how much the more they have endured the fire, by so much the better are they corrected; from whence the diversity of their power proceeds: Wherefore each of them are to be kept by themselves, and the uppermost are for Plaisters or Batter, or Oyl, and those to be made sweet or corrosive thereby; The middle for purging, and vomiting, but the lowermost for sweat, being more excellent than *Bezoardicum Minerale*, or *Antimonium Diaphoreticum* made with Nitre. Truly I do not believe that there is an easier way of making vomiting, and diaphoretical flowers than ours. Now for the use of them, you must know, that those that are vomitive are to be administred to those that are strong, and accustomed to vomit: but to children, and old men with discretion, as hath been said above of the Butter of Antimony: but those that are diaphoretical may be given without danger to old and young, to those that are in health, and to the sick; in any affection that requires sweat, as in the Plague, *Morbus Gallicus*, Scorbute, Leprosie, Feavers, *&c.* The Dose of them is from 3. 6. 9. 12. grains to 24. with proper vehicles to sweat in the bed: for they do expel as well by sweat, as by urine all evil humors: And because they that are vomitive are in a greater quantity than those that are diaphoretical, and not so necessary as these, and there may be many more doses out of them, it is necessary to shew you how those that are vomitive may be turned into diaphoretical; and that may be done three wayes, the two former whereof I have before shewed concerning the Butter of Antimony made of flowers with Spirit of Salt, the third is this, *viz.* put flowers in a Crucible covered (without luting) lest any thing fall into it, so set them by themselves in a gentle fire, that they melt not, but be made only darkly glow for the space of some hours, then let them cool, for they are become fixed, and diaphoretical; Although they had before con-

contracted some yellowness or ash-colour, yet by this means they are made white and gallant, fixed, and diaphoretical: Also these flowers are used in stiptick Plaisters, by reason of their dry nature, with which they are endued.

Also they are melted into a yellow transparent Glass, neither is there taught an easier way of reducing Antimony by it self into a yellow transparent Glass, where crude Antimony is first sublimed, and being sublimed is melted into Glass.

This Sublimation serves in stead of Calcination, by the help whereof 20 pounds are more easily sublimed, than by the help of the other one pound is brought into Calx.

Neither is there here any danger of the ascending fumes, because when the Antimony is cast into the fire you may be gone, which is a safe, and easie Calcination, whereas the common way requires the continual presence of the Artist stirring the matter, who also takes out the matter when it is once grown together, and grinds it again; by which means he hath much to do, before the matter come to a whiteness; but by our way, the matter is at the first time made sufficiently white, and more than by that common way of calcination and agitation. I suppose therefore, that I have shewed to him that will make Glass of Antimony, the best and hitherto unknown way; which being taught, I hope, there is no man will hereafter, like a fool, go that tedious way of the Ancients, but rather follow my steps: For by this way may any Physitian, most easily be able to prepare for himself vomitive and diaphoretical flowers, and also Glass of Antimony *per se*.

Of those flowers may be made Oyls both sweet and corrosive, and other medicaments, as hath been aboveſaid of the Spirit of Salt, and shall afterwards be spoken in the second part.

Let him that will make flowers of the *regulus*, fairer than those which are made of crude Antimony, cast it being powdered, into the fire, and in all proceed as hath been said, and he shall have them, *&c.* for they are easily sublimed. The scory also are sublimed, so as nothing is lost: But he that will make flowers that shall be dissolved in the air into a liquor must add some calcined Tartar, or some other fixt vegetable Salt, and he shall have flowers that will be dissolved in any liquor: but he that will

make red flowers as well those that are diaphoretical as those that are purging, must mix Iron, and he shall have flowers like to Cinnabar: Let him that desires green, mix Copper, if purple, *Lapis calaminaris.*

And thus out of any Mineral may be made flowers, whether it be fixed, or volatile, for it is forced to fly on high being cast into the fire. And these may be used diversly in Chyrurgery, in Plasters and Unguents; for they dry, and astringe potently, especially those that are made of *Lapis calaminaris.* Neither are they to be slighted that are made of the golden, and silver marcasite. Those that are made of Arsenick and *Auripigmentum* are poysonous, but are useful for Painters. Arsenick and *Auripigmentum* being calcined with Nitre, and then sublimed, yield flowers that are safely to be taken inwardly, expelling all poysons by sweat and stool: For they are corrected two ways, *viz.* first by the Nitre, secondly by the fire in the subliming: they are not therefore to be feared, because that Antimony was poysonous before the preparation thereof: For by how much the greater poyson it was before preparation, so much the greater medicine afterwards.

So also stones, being prepared, are brought into flowers, and many other things, of which we need not say any thing, only let him that pleaseth make tryal thereof.

Of

Of CALCINATION.

BOOK VIII.

What Calcination is, and the ſeveral wayes thereof.

1. *Calcination* is the reducing of a Body into a Calx.

2. By *Geber*, it is thus defined, It is the reducing of a thing into powder by fire, through the deprivation of the humidity of the ſolid parts, in burning of it.

3. By Calx, Chymiſts underſtand, any thing made into a fine powder, by taking away its ſuperfluous humidity, (eſpecially Minerals): Alſo, when the powder or Calx is plainly made impalpable, very ſubtil to the ſenſe, like fine meal, then it is called *Alcohol*; which word alſo they uſe for the very ſubtil ſpirit of Wine, rectified with often reiterated Diſtillations, calling of it the *Alcohol* of Wine.

Calcination is either by Corroſion, or by heat of Fire only.

Corroſion is the Calcination of the matter by Corroſives, and is done divers wayes, but eſpecially four; *viz.* by *Amalgamation*, *Precipitation*, *Stratification*, and *Fumigation*.

1. *Amalgamation*, is the Corrosion of a Mettal by Mercury or Quicksilver; and is when any metal (except Iron) is made into thin plates, and mixed with eight parts, more or less, of Mercury, and made into a mass, alike throughout, that the metal be perfectly dissolved; and when the Mercury is evaporated away over the fire, the Mettal is left behind like a thin Calx.

2. *Precipitation*, is the corroding of the matter by *Aqua fortis*, and other acrid Spirits, and is when Mineral and Mettaline bodies are infused in a corrosive or other acid water, and thereby corroded and dissolved; either by abstraction of the water, or after some other way are reduced into a Calx.

3. *Stratification*, is the Corrosion of Metals by corrosive powders:

And is performed thus, By filling the Crucible, Box, or Calcining pot, with the laminated Metal and corrosive powders; *Stratum super stratum*; that is, by laying some of the powder in the pot, and then some of the thin laminated Metal, and so proceed till the Vessel be full; afterwards put coals round about it and give it a reverberatory fire, increasing of it by degrees, as the matter requires.

Sometimes you may call it *Cementation*, there being but little difference between them.

Commixtion is also when the matter to be corroded is mixed with the corrosive powders, and afterwards, in the fire, is reduced into Calx.

4. *Fumigation* is the Corrosion of a Mettal by Fume or Vapour.

And is done divers wayes: In general this shall suffice, that the Mettaline body be reduced into thin plates, and that it be hanged to be calcined, over the fume of *Aqua fortis*, Vinegar, or the vapour of melted Lead, or of Mercury, or any other sharp matter, as usually they prepare Ceruse.

Ignition or Calcination by the fire only, is either by *Cinefaction*, or by *Reverberation*.

1. *Cinefaction*, is the reducing of Vegetable or Animal bodies into ashes, by the violence of fire.

2. *Reverberation*, is the Calcining of bodies in the naked fire, in a Reverberatory Furnace.

To

To this also belongs, the Desiccation of the humidity that is usually in Vitriol, Salt, Allome, &c.

As for the Furnaces and Vessels to be used in Calcination, you shall finde them mentioned and described in each following process, to which they properly belong.

The Calcination of Common Salt.

Put common Salt in a Crucible, or other Earthen Vessel, and when it is almost full, cover it, and set it on burning coals, and there let it stand until it be throughout red hot, and no more crackle; then let it cool, and it is fit to dissolve, &c.

The Calcination of Salt Peter.

Dissolve Salt-Peter in common water, and filter it through Paper, to cleanse it from its filth; then boyl it in a glased vessel, and before it coagulate, scum it; when it is dry, grind it; then put it in a pot, and in a fire of coals, by degrees, melt it; when it is melted, to one pound of Nitre, cast in one ounce of the flowers of Sulphur, by little and little, as long as it will flame, (the blew flame is to be avoided.) This Solution, Filtration, Decoction, Despumation, Coagulation, Liquefaction, and Deflagration of the Salt-peter, if it be three times repeated, it is sufficiently prepared for Physick, it is hereby made more airy, penetrative, diuretick. and less corrosive.

The Calcination of Vitriol.

Let the Vitriol be Calcined till it be white, in an earthen vessel unglased, in a moderate fire, alwayes stirring the same; then increase the fire till it be red: and then it is called the *Colcothar of Vitriol,*

The Calcination of Pumex-ſtone.

Take Pumex-ſtone, and heat it, and quench it four or five times in Wine Vinegar, the laſt time only heat it without quenching; ſo is it very eaſily made into Calx, and is then uſeful for the extraction of the tinctures of Mettals and Minerals.

The Calcination of Cryſtal.

Set Cryſtal ſix hours in a Crucible in the naked fire, then grind it to a fine powder, and mix with it a like quantity of Salt-Peter, and then Reverberate it, in a ſtrong fire, 18 hours; when it is melted, caſt it into rain water, or *May* dew, and that which remaineth undiſſolved, dry and reduce it into Alcohol; then, with the ſame water, boyl it until it be as thick as honey, and lay it in the cold, upon glaſs, till it be dry; then again reduce it into *Alcohol*, and, if you will, you may ſet it in a moiſt place to diſſolve; and if any remain undiſſolved, repeat the ſaid Calcination with Nitre, *&c.* as aboveſaid, until it be made Solubl[e].

Its Doſe is three or four drops, with the like quantity of oyl of Juniper, in ſome ſpecifick water, againſt the Stone of the Reins and Bladder.

Another way to Calcine Cryſtal.

Take cleer and ponderous Cryſtal, heat it, and quench it in diſtilled Vinegar, ſo often until, with the leaſt touch, it fall into powder; then mix it with the like quantity of Salt-Peter, and reverberate it for 18 hours, even till it be ready to melt; then, with often waſhing, extract the fix Salt of the Nitre, and dry the remaining Cryſtal, and reduce it into Alcohol.

Its Doſe is from half a ſcruple, to a ſcruple and a half: It is good in the Stone, Falling-ſickneſs, Diſentery, and want of Milk.

But if you will make this yet more ſubtile, digeſt it in ſpirit of Wine 24 hours, and Diſtil it by Retort, and that which remaineth fixt, reverberate it, as before; Digeſt it and Diſtil it ſo often, until the greater part aſcend with the ſpirit of Wine; then Diſtil of the ſpirit of Wine, and that which remaineth in the Veſſel, ſet in a moiſt place to diſſolve into Water or Oyl,

Another and better way to Calcine Cryſtal.

Heat the Cryſtal red hot in a Crucible, and quench it in cold water, that it may eaſily be reduced into powder; or (being powdered) burn it in an open Crucible *per Ignem Rotæ*, with a like quantity of common Sulphur, until all the Sulphur, by a gradual fire, be burnt away; then waſh the Calx with water, and dry it, and mix with it a like quantity of purified Salt-Peter; then Calcine that in *igne Rotæ* till it melt; when it is cold, powder it and boyl it in rain water, and proceed as before.

The Calcination of the Silver Marchaſite or Wiſmuth.

Reduce the Silver Marchaſite into ſubtle powder, and waſh away its blackneſs, with water ſo often, until the water flow away clear; then dry it and diſſolve it in *Aqua fortis*, Diſtilled from Salt-Peter and Allom: When the ſolution is clear, pour thereon ſpirit of Wine; ſo, in a moment, will it be precipitated into an Alcohol as white as ſnow, which ought to be cleared from its Acrimony and dryed; and again for half an hour ground with common Salt prepared; then waſhed and dryed in the ſhade on paper.

Its uſe is againſt the Deformities of the skin, as freckles, ſun-burn, &c.

To Calcine Allom.

Take Allom, put it in an unglaſed earthen pan, and ſet it on a gentle fire that it melt; and ſo increaſe the fire by degrees, till all

all the humidity be evaporated, and the Allom remain a white, dry, ſpongy, light Calx.

To Calcine Antimony with Salt prepared.

Take of the beſt Antimony four pounds, of Salt prepared five pounds, powder them and mix them together, and in a broad earthen pan with a flat bottom upon the fire; ſtir them well together continually with an Iron Spatula for five or ſix hours or more, until it leave fuming, and the Antimony remain white and yellowiſh (but be careful that it melt not, and alſo of the fume); then grind it to powder, and waſh away the Salt, firſt with hot water, then with cold that which remains dry, which powder ſublime *per ſe* in a Sublimatory for 10 or 12 hours or more: Reſerve the flowers, and grind the *Caput Mortuum*, and reverberate it 40 dayes till it be red, in a cloſe Veſſel that the fire be not hindered in the operation; after which Calcination, extract the tincture with Radicated Vinegar; then finiſh it by Filtration, Separation of the *Menſtruum*, and Circulation with Cordial waters.

To Calcine Antimony per ſe.

Take the beſt and choiceſt Antimony, powder it very fine, and ſet it in a broad earthen pan unglaſed over a gentle fire of Char-cole, and there continually ſtir it with an Iron Spatula, increaſing the fire by degrees, till it burn no more blew, nor fume no more, but remains of a pale aſh-colour; let the fire be ſo moderate that it melt not, or if it ſhould happen to melt, take it off and powder it, and ſo proceed as before: To make this into a *Vitrum*, put it in a Crucible in a melting Furnace, and there let it ſtand melted until it be converted into a pure red *Vitrum* (which you may prove with an iron rod dipping it therein, and quickly retracting the ſame again, left it melt in the Antimony, and ſo a *Regulus precipitate*) then caſt it forth into a braſs or copper pan flat in the bottom; and there have you the *Vitrum Antimonii* made without additions, according to *Baſilius Valentinus*, mentioned alſo by *Zwelferus*, *Schroderus*, and others.

Out

Out of which is extracted the true Tincture of Antimony.

Crocus Metallorum, *or, The liver of Antimony.*

Take Crude Antimony and Salt-Peter, of each a like quantity, beat them ſmall, mix them, and put them into an Iron Mortar, inclining ſideway; then kindle the powder with a quick Charcole, or a red hot iron rod, and ſo will the Antimony be fixed, and deprived of its Arſenical Sulphur; then ſeparate the Salt-Peter, and edulcorate the *Hepar* or *Crocus Metallorum.*

Its uſe.

From 12 to 20 grains thereof are given, being infuſed in the water of *Carduus Benedictus*, or other convenient liquor, or in ſome Conſerves; in all Feavers, and Peſtilences, and ſuch like effects, wherein you would have it gently purg.

To Calcine Antimony, that it ſhall purge only per Seceſſum.

℞. Take of the beſt and choiceſt Antimony, and of Salt decrepitated, of each one pound, grind and mix them together, and reverberate them in a Crucible, well luted and cloſed, for 12 hours, increaſing the fire by degrees; then waſh away the Salt with water, ſo often, until all the Acrimony be taken away; then dry it and grind it.

The Doſe is from 25 grains to 35 grains: or, from a ſcruple and a half, to a ſcruple.

The Calcination of Mettals.

To Calcine Gold by Amalgamation.

TAke Gold purified by Cementation, and Amalgamate it with ſix parts of Mercury, thus, Take laminated Gold, and cut it into ſmall pieces, and put it into a clean Crucible in the fire, that the Gold may be red hot; then heat the Mercury in another Crucible, and pour it on the Gold, and mix them with a ſtick that they may unite together; then caſt it into cold water, and waſh it very well, and preſs out the ſuperfluous Mercury through Leather, that it may remain as a hard maſs, which muſt be ground well with half its weight of prepared Salt, in a glaſs Mortar, that nothing of the *Amalgama* appear: This put in a Crucible covered and luted, with only a ſmall hole on the top, and reverberate it a natural day, but let not the Gold melt; this done, you ſhall finde the Gold calcined, but the Mercury and Salt fumed away, if the Salt were rightly prepared, and the degrees of the fire rightly obſerved; otherwiſe ſome of the Salt remains, which muſt be waſhed away, and the Calx dryed: Then *Amalgama* the Gold again, and preſs it through the Leather, as before; and mix therewith half its weight of Sulphur *vive*, or flowers of Sulphur, grind them very well together, and put them in a glaſed earthen pan, and pour thereon the beſt ſpirit of Wine without Phlegm, and burn it; after the ſpirit of Wine and Sulphur are burnt away, you ſhall find the Gold very ſpongy and light, eſpecially if you twice or thrice repeat the operation. Some grind the *Amalgama* with flowers of Sulphur, and put it in the fire in a Crucible, continually ſtirring it with an Iron

Iron-rod, until the Mercury be fumed away: And this is the Calcination of Gold, which may very well ſerve in the preparing of *Aurum potabile*, and ſuch like Chymical operations.

The Calcination of Gold by Cementation.

Before the Gold be amalgamed and calcined as aforeſaid, it ought to be cemented, either with the Common or Royal Cementation.

The Common Cementation.

Take the powder of Tyles eight ounces, Salt prepared four ounces, white Vitriol two ounces, Salt-Peter and Verdigreece of each half an ounce; mix them.

The Royal Cement.

Take the powder of Tyles four parts, Sal-Armoniack, Salgemme, and common Salt prepared, of each one part; mix them well altogether, and moiſten it with urine (ſome neal the Plates of Gold in the fire before they uſe them with the cement, that whatſoever filth ſticketh to it be burnt off, that the cement may have the better impreſſion). All things being rightly prepared, equally lay a part of the powder of the Cementing-pot or box, about a fingers thickneſs, then lay the Plates moiſtned with Urine, in that order and manner that they neither touch one the other, nor the ſides of the Veſſel: Having thus laid the firſt order of Plates, lay more of the Cementing powder about half a fingers thickneſs, and then more plates, and more powder, and ſo proceed till the Box be either full, or all your Plates uſed; and at laſt let there be of the powder a fingers thickneſs at the top; then lute on a cover if it be a common Cement, without leaving any vent or hole; but if it be *Cementum Regale*, then let there be a ſmall hole in the cover, give fire for 24. hours, ſo that the Cementing-pot or Box be alwayes red-hot; when the work is ended, take the Plates and wipe off the Powder ſticking to them, with a Hares-foot, and waſh them with urine, and dry them.

The most perfect Cementation of Gold is that which follows.

Melt Gold with twice its weight of the best Copper reduce it into plates as thin as paper, which cement for 40. or 50. hours in a strong fire, by laying *Stratum super Stratum* (as before is said) with the powder of Tyles, common Salt, Colcothar, Verdigreece, and a little Sal-Armoniack, all mixt with strong Vinegar; in this *Examen*, all the Copper is consumed, its incombustible Sulphur, and tincture remaining in the Substance of the Gold, as *Geber* testifieth *in his* 18. *Chapter of Furnaces*, that out of Copper is extracted a most pure tinging and fixt Sulphur.

The Calcination of Gold by Aqua-Regis.

That your labour be not too tedious, and that your Gold be most perfectly purified, dissolve an ounce of Hungarian, or other choice Gold in *Aqua-Regia*, made of pure Nitre and Sal-armoniack, of each a like quantity, according to Art; then gently decant what is dissolved, that the white earth which remains in the bottom undissolved may be separated (which reduce with Borax, and it is a white metal, that will be dissolved in common *Aqua-fortis*) then put your Gold dissolved into a large Glass with a short neck, and add thereto five or six times so much common water, and heat the same in Sand till it boyl; then add thereto two ounces of Mercury first made hot; and if in two hours the *Aqua-Regia* wherein the Gold is dissolved, be not strong enough to dissolve the Mercury, add of common *Aqua-fortis* as much as is sufficient to dissolve the same; then add other two ounces of Mercury, which likewise dissolve, until you see all the Gold precipitated into a spongy mass in the bottom of the vessel, and the Mercury dissolved into a clear and transparent water, which you must decant while it is hot, and gently wash the Gold with warm water, until it be deprived of its acidity, which will be much more purified, and with less labour and cost, than with Cement or Antimony: I have sometimes purified Gold by Antimony, which was very beautiful and

and exceeding ſplendid, yet when I diſſolved it, I ſeparated from it a little white earth, whence it appears, that this *Examen* is much more exact, than that which is made either by Cement, or by Antimony.

The Calcination of Silver by Aqua-fortis.

Diſſolve Silver in *Aqua-fortis*, pour thereon Salt-water, and the Silver will precipitate to the bottom of the body, into a pure white Calx, which muſt be edulcorated by often waſhing the ſame with common water, and then dryed: If to one ounce of this Calx, you add of Salt prepared two ounces, and Sal-armoniack two drams; mix them well together in a Glaſs-mortar, and reverberate them 8. dayes; you may extract the Tincture with the Alcohol of Wine, and circulate it: It is good againſt Madneſs and other diſeaſes of the Brain.

To Calcine Silver by Fumigation.

Lay the Plates of Silver over a Crucible wherein Sulphur is burning; let them be often turned, and that which is burned and calcined, ſeparate with a Spatula, till all be calcined, then reverberate the Calx.

The Calcination of Copper by Aqua fortis.

Diſſolve Copper in *Aqua-fortis*, and add thereto warm water, with a little Iron or Silver, and it will be precipitated to the bottom; then abſtract again the *Aqua-fortis* by Diſtillation.

Another way to Calcine Copper.

Take the Plates of Copper, and reverberate them in a Potters Furnace, where they are eaſily reduced into a Calx.

Or,

Take the Plates of Copper, and lay them in a Crucible *Stratum ſuper Stratum*, with an equal part of the powder of Sulphur, and let them be reverberated three or four hours into a *Crocus veneris*.

Another way to make Crocus Veneris.

Take the thin Plates of Copper, and lay them *Stratum ſuper ſtratum* in a firm Earthen or Iron-pot with prepared Salt, and by little and little heat the Pot of a gentle red heat; then caſt them into a veſſel full of cold water, and cleanſe the Plates from their blackneſs, and the Salt very well with Iron Spatulaes; Then when they are dry, calcine them with Salt as before, and caſt them into cold water, and ſo proceed as you did with the other; then let the Water (wherein the Plates were quencht) be mixed with hot-Water, to take away all its ſaltneſs, and the *Crocus Veneris* will be left in the bottom very red, like unto bloud, which being carefully cleanſed by waſhing away its ſaltneſs, dryed and ground; Skilful Chyrurgeons diligently preſerve it to make their Stiptick Emplaſtrums withal, which they call Opodeldoch.

The Calcination of Iron.

Take the thin Plates or filings of Steel, very well cleanſed from their filth, take thereof two pounds, of Salt prepared three pounds; mix them well together, and reverberate them in an Earthen veſſel, for a natural day; take out the Maſs, and grind it, diſſolve it in hot-water, and waſh it ſo often, until it be freed from all its ſaltneſs and earthlineſs; then let it be dryed and reduced into a ſubtile powder by grinding and ſearcing it; then reverberate it for eight or ten days, until the ſuperficies thereof, be elevated into a very red impalpable *Crocus*, which take off, and reverberate the reſt ſo often, and until the whole be reduced into a *Crocus*: Let the Earthen veſſel containing the matter, have a Cover, leſt aſhes fall on the *Crocus*, yet high enough, that the flame may have its free paſſage between the veſſel and cover.

But the beſt *Crocus Martis*, and that which is moſt excellent for Phyſical uſe is, when only the filings of Steel, without the addition of Salt, or any other heterogeneal thing,

thing, is converted into a fine flower, by only a reverberatory fire, and afterward cleanſed from its impurities, by waſhing of it in water; for that which is made with Corroſives, as Salt, &c. is not without ſome hurtful quality: But the operation by Reverberation is better and ſpeedilyer performed, if before it be put in the Reverberatory, the ſteel filings be ſometimes ſprinkled with boyes urine; for, by this means, as it Reverberateth, it dayly ariſeth into a very fine red flowre, which is dayly to be taken off, leſt you looſe it by the ſwiftneſs of the reverberating flame, or leſt it looſe its red colour, and change it into a blackiſh.

The uſe of *Crocus Martis*, is uſually internal, to ſtop the flux of the belly, Diarrhea, and Diſentery, but muſt be cautiouſly uſed; for oftentimes ſuch Aſtringents not diſcretly adminiſtred, bring greater evils; wherefore, they that uſe it, ought firſt to be purged by medicines attenuating and cleanſing the belly. Its external uſe is, in drying up Ulcers and Wounds.

To make Crocus Martis *by* Aqua Fortis.

Diſſolve the filings of Steel one ounce, in eight ounces of *Aqua Fortis*, digeſt it for a night: then diſtil off the *Aqua fortis* in ſand, and you have an ounce and half of very red *Crocus*; which, that it may acquire its aſtringent vertue, it muſt be Reverberated three or four hours; ſo may it ſafely be uſed, as well within, as without the body.

To make Crocus Martis *by Cementation.*

Take freſh *Calx vive*, as much as you need, and moyſten the ſame with mans urine, until it be like pap; then cover the bottom of the Cementing-pot therewith about a finger thick; then lay thereon the filings of Steel, and ſo, *Stratum ſuper ſtratum*, fill the Veſſel, and firmly Inte it; when all is ready, place it in the Cementing-Furnace, and adminiſter thereto a continual fire, from the third to the fourth degree, for 24 hours; then take out the Veſſel, and beat the matter well in a Mortar, and ſearce it that it be made a very ſubtile powder; and when you have waſhed away all the *Calx vive* from the Steel, with hot water,

water, and dryed the remaining matter, then have you a moſt excellent *Crocus Martis*.

After the ſame manner may be made *Crocus Veneris*, which may ſerve for many operations.

Another way.

Take filings of Steel and Sulphur, of each equal parts, grind them together, and ſprinkle them with water, until it be a ſoft maſs, then dry the ſame; afterwards put it in a large Crucible, in a moderate fire, continually ſtirring the ſame with an Iron rod, until all the Sulphur be conſumed; then abſtract the red *Crocus* with rain water.

Its doſe is one dram.

The Calcination of Saturn or Lead.

Melt Lead in an Earthen or Iron Veſſel, and cleanſe it from its *Scoria* or filth ariſing thereon; then increaſe the fire that the Veſſel be red hot, and by continual ſtirring it with an Iron Spatula, reduce it into a Calx, which afterwards ſearce: But if you will then reverberate it, it will be converted into *Minium*.

The Calcination of Tin.

Take of *Engliſh* Tin, not ſophiſticated (which is known by the weight and malleableneſs thereof) four pounds, melt it in a pan of a flat bottom, and purge it from its *Scoria*; then caſt therein a little Salt armoniack, and increaſe the fire that the pan be red hot; then add thereto one pound and a half of prepared Salt, and ſtir it ſo long with an Iron Spatula, till it be reduced into a Calx: which, by a ſtrong fire, you may reduce again into a body, whereby it is cleanſed from its impurity and blackneſs: Then Calcine it as aforeſaid again, with one pound of prepared Salt, and waſh the Calx from its ſaltneſs, and reverberate it eight dayes, and it will be converted into Alcohol.

It

It may alſo be Calcined without the addition of Salt, as before is ſaid of Lead, which ſeemeth to be the better way.

The Calcination of Mercury.

Diſſolve Mercury in *Aqua fortis*, and by the adding thereto of Salt water, it will precipitate into a white powder; the diſſolvent pour off by inclination, and that which is precipitated, cleanſe it from all its ſaltneſs and acrimony, by many ablutions and by digeſtion; then dry it, and waſh it with Roſe water, and dry it again.

Its inward Doſe is from 8 grains to ten, eſpecially in Venerial diſtempers. It purgeth only downwards.

Red Precipitate of Mercury.

Diſſolve Mercury in *Aqua fortis*, and after the diſſolution, evaporate the *Aqua fortis* in a ſtrong fire, till it be dry, and in the bottom of the Veſſel will remain the Precipitate in a red powder.

It is generally uſed in outward adminiſtrations, but ſeldom or never uſed inwardly.

The beſt way to Precipitate Mercury.

Take purified Mercury 4 ounces, Oyl of Sulphur rectified 8 ounces, mix and digeſt them two dayes in ſand; then diſtil it by Retort, with three Cohobations; at laſt, with a very ſtrong fire, that the Retort may be red hot; take out the white maſs, and grind it, and waſh it oftentimes with hot diſtilled water, until the Precipitate turn to a very yellow powder; upon which burn ſpirit of Wine three times.

This may be ſafely given within the body, from 3 or 4 grains to 6, in purging extracts or conſerves of Roſes. It is good in a Virulent Gonorrhea, French-Pox, &c.

To Precipitate Mercury in a moment.

Put Emery powdered into a Crucible, in a very ſtrong fire, for four hours, until it begin to vitrifie and ſtick to the ſides of the Crucible; then take it off from the fire, and grind it to a very ſubtil powder, and put into a glaſs body; to which pour *Aqua regis* rectified, and digeſt it in heat for 24 hours; then pour off the tinged water, and add more until you have extracted all the tincture; then diſtil off the tinged waters to an oylineſs; of which Oyl take one ounce, and pour it upon 4 ounces of crude Mercury, and ſo the Mercury will in a moment be Precipitated, and not adhere to the Oyl: Then if you diſtil it with a ſtrong fire, after the exhalation of the Oyl, ſome of the Mercury will ſublime, but the greateſt part will remain fixt.

Its uſe is in the Augmentation of Sol, and to make red *Vitrum*.

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FINIS.

THE
London-Diſtiller,

Exactly and truly ſhewing

The way (in words at length, and not in myſterious *CHARACTERS* and *FIGURES*) to draw all Sorts of

SPIRITS
AND
Strong-Waters:

To which is added

Their Vertues, with Additions of many Excellent

WATERS.

LONDON,
Printed by *E. Cotes*, for *Thomas Williams*, at the Sign of the Bible in *Little-Britain*,
1664.

THE *LONDON-DISTILLER:* OR, Rules and Directions for extracting and drawing of *Low-Wines* and *Spirits*, to be Re-diſtilled into *Rich Spirits*, *Strong Waters*, or *Aqua-vitæ*.

WHereas ſome of the Profeſſors of Diſtillation, in and about *London*, have heretofore uſually drawn Strong-waters, and *Aqua-vitæ*, *&c.* out of Wines, Low-wines, and ſmall Spirits, *&c.* by one alone immediate extraction, operation, or diſtillation, (contrary to the moſt approved form of working in this our Art) and have been ſo opinionated of their own hereditary erroneous ways, that they have eſteemed the manner and order here taught, to be altogether unneceſſary and improvident, in that there is here required *Re-diſtillation*, which they have ever thought to be ſuperfluous: Not conſidering, that what they ſave by their ſeeming thrift, they loſe double in the excellency of their Wares, and otherwiſe. Wherefore that ſuch may not only acquit themſelves of an aſperſion of ignorance (not undeſervedly caſt upon them) but alſo vindicate both their own, and the Companies reputation, for time to come: The directions following are henceforth by them and every Member of the Company, and their Succeſſors, duly and exactly to be obſerved and practiſed from time to time for ever hereafter.

That all Wines, Lees of Wines, *Low*-Wines, and Spirits, under proof whatſoever (intended for making of rich or high Spirits, Strong-Waters, or *Aqua-vitæ*, *&c.*) be firſt diſtilled extracted, or drawn into ſtrong Proof-Spirit, whereby they may be corrected and cured of their natural, harſh, diſtaſteful, unſavory, or evil qualities, before they be compounded with ingredients, or extracted and drawn into rich or high Spirits, Strong-waters, or *Aqua-vitæ*; according to Art, and as is required in the enſuing Rules.

And becauſe many groſs abſurdities have been frequently practiſed in adulterating ſome, and abuſing others, of the materials uſed in Diſtillation, and otherwiſe by *Diſtillers*, by ſuch as only reſpect their own particular gain; regarding neither the profit or credit of *Diſtillers* that have been neceſſitated to make uſe of ſuch their ill-conditioned Wares: Wherefore that theſe grievances may be removed for time to come, the Directions following are ſtrictly to be obſerved and practiſed by all the Members of this Company and their Succeſſors from time to time for ever.

That no After-worts or Waſh (made by Brewers, *&c.*) called *Blew John*, nor muſty, unſavory, or unwholeſome Tilts, or Dregs of Beer or Ale; nor unwholeſome or adulterated Wines, or Lees of Wines; nor unwholeſome Sugar-waters; muſty, unſavoury, or unwholeſome returned Beer or Ale; nor rotten, corrupt, or unſavory Fruits, Drugs, Spices, Hearbs, Seeds, nor any other ill-conditioned materials of what kind ſoever, ſhall henceforth be diſtilled, extracted or drawn into ſmall-Spirits, or Low-wines, or be any other wayes uſed, directly or indirectly, by any the Members of this Company, or their Succeſſors, at any time hereafter for ever.

And whereas of late times the Small Spirits or Low-Wines, made and ſold, as well in and about *London*, as elſewhere in this Common-wealth, have been generally complained of, for their mean, weak, and poor condition; whereby many inconveniences have faln upon moſt of the *Diſtillers* in general; and that not through the alone practiſes of ſuch, as have no juſt title to, or intereſt in this corporation; but even by ſome of the *Diſtillers* themſelves, who (notwithſtanding their pretences of being neceſſitated

ceſſitated thereunto) have juſtly deſerved reproof, for yielding to be Actors in a thing of ſuch ill conſequence to *Diſtillers* in general. Wherefore, that thoſe abuſes and diſorders may now be taken away, and the like prevented for time to come, the enſuing Rule is duly to be obſerved and practiſed.

That no Small-ſpirits, or Low-wines, ſhall henceforth be diſtilled, extracted, or made, and be allowed to be ſold put to ſale, or uſed by any of the Members of the Company, or their Succeſſors: but ſuch only, as out of which, by one alone re-diſtillation, extraction, or operation, may be produced in quantity, at leſt one third part thereof, of good ſtrong Proof-ſpirit, ſuch as is required in the Rules enſuing, for making rich, or high Spirits, Strong-waters, or *Aqua-vitæ*, *&c.* under ſuch pains, penalties, and puniſhments, as by the Laws of the Common-wealth, Ordinances, or Orders of the Company, or otherwiſe, may be impoſed or inflicted on the contemners, neglecters, or oppoſers of theſe Directions.

Rules and Directions for the Company of Diſtillers of *London*, in general:

But more eſpecially for ſuch of them, as now do, or hereafter ſhall make Vinegars, *&c.*

WHereas upon due examination it hath plainly appeared, That many inſufferable inconveniences have of late ſain upon this Company, and their Trade, in general; by reaſon of the diſorderly and abuſive expence and imployment of Brewers After-worts (called Waſh;) Inſomuch, that thereby not only thoſe of this Company that have had no hand herein, but even the Diſtillers themſelves that have been the Delinquents, have intolerably ſuffered both in their Reputation and great decay of their Trades, by theſe their alone inconſiderate practiſes. For Reformation of the preſent diſorders and abuſes, and future pre-

vention of the like, theſe enſuing Admonitions and Directions are ſtrictly to be obſerved and practiſed, *viz.*

That no Member or Members of this Company, or their ſucceſſors, nor any of them, at any time hereafter, for ever, by any way or means whatſoever (directly or indirectly) ſhall or may, uſe, diſpoſe, convert or imploy, any After-worts (or Waſh, made by the Brewers, or others) into Vinegar, Beer-eager, or Ale-eager, or either of them; or to or for any other uſe or imployment whatſoever, except only to diſtil the ſame into Low-wines, or Spirits, to be rediſtilled into Proof-ſpirit for the uſes aforeſaid, according to the true intent and meaning of theſe Directions, as they and every of them reſpect their Oaths by them taken when they were made free, and received into this Incorporation;) And will undergo the penalties provided, or to be provided, by the ordinances of this Company, or otherwiſe, to be impoſed or inflicted on the Contemners, Neglecters, or Oppoſers hereof.

Rule I.

Provide three ſweet Tuns (or ſmaller Casks) place them orderly on ſcantlings; provide good ſound white Rape, and ſuch well conditioned liquid Materials as are proper for this uſe, what ſufficeth (not muſty in any caſe.) Then number your Tuns 1, 2, 3. Fill Tun 1, with Rape within ſix inches of the Bungue, ſtop the Bungue with Cork or Wood very cloſe, and let it ſtand, and in few dayes it will gather heat; then being conveniently hot, fill up the veſſel within three inches of top full, with your liquid materials without Dregs; ſtop it cloſe again. And at that inſtant, in like manner as before, fill Tun 2, with Rape, after a few days, that will be hot as the former was; then finding it conveniently hot, draw off Tun 1, and put it into Tun 2, and ſtop both cloſe: At the preſent fill Tun 3, with Rape, and order it in every reſpect, as you did the former. And when Tuns, 1 and 3, have gathered heat ſufficient, fill up Tun 1, with freſh liquor (as at firſt) and draw off Tun 2, and put it into Tun 3, and ſo let Tun 2, gather ſufficient heat again; then draw off Tun 1, and put it into Tun 2. And at that preſent, you may draw off Tun 3, and put it into a ſtore-Cask; for having paſſed three times through the

the Rape, it is thereby become to be good merchantable Ware.

And ſo in like order, ſupply one Veſſel from another, till you have finiſhed your work according to Art.

When all your liquid Materials are ſpent, ſo that you have no more to continue your work; then be ſure your Tuns ſtand neer full, till you are provided of more Liquor, to put upon your Rape; for if your Rape (ſtanding dry) ſhould wax hot, you having nothing proper to ſupply the ſame, your Rape will ſoon decay, and be utterly ſpoyled.

In Summer or warm weather, the Rape will gather ſufficient heat in two or three days; but in Winter it will require more time.

Rule. II.

Take 20 Quarters of good ſound Maulr, convert it into 100 Barrels of good ſerviceable Ware; (at the moſt) you muſt allow to this quantity, good ſweet Hops at leaſt 56 pound. And being well wrought according to Art, put it into ſweet Caske, (ſweet Oyl-Buts are beſt) fill them within 8 inches of the Bungues, (being laid upon Scantlings in the Sun) let not the head work over at the Bungues, and it will ſink to the bottom; Prepare little covers of wood fit to cover the Bungues, and larger covers to lay over them, to defend it from Rain falling into the Cask. Let the Bungues ſtand open only, when the Sun ſhines hot upon the Cask; but in cloſe or wet weather, and nights, let both covers be alwayes kept on.

When the firſt Head of the Liquor is falu, then draw it from the Lee, into another clean ſweet Cask; and ſo afterward from Cask to Cask, as there ſhall be cauſe, till it come to perfection: Then draw it off into another ſound Cask, and ſo houſe it for uſe.

The largeſt Cask are the fitteſt to houſe, and keep Wares in for ſtore.

If your Wares grow long and ropy, then put a fit quantity of Allum into it, work it well together according to Art, and it will grow ſhort again.

THE

THE *LONDON-DISTILLER:*

OR,

Rules and Directions for Preparing, Composing, Distilling, Extracting, and making of rich Spirits, Strong-Waters, Aqua-vitæs, &c.

CHAP. I. *Of* Aqua-vitæ, *the first sort.*

The greater quantity.

TAke strong Proof-spirit 10 Gallons, Aniseeds bruised one pound, distil them into strong Proof-spirit according to Art.

The lesser quantity.

Take strong Proof-spirit 1 gallon, Aniseeds bruised 1 ounce 4 drams; distil them into strong Proof-spirit according to Art.

CHAP. II. Aqua-vitæ, *the second sort.*

The greater quantity.

Take strong Proof-spirit what sufficeth, Aniseeds 2 pound, Carraway-seeds, Coriander-seeds, *ana* 4 ounces; distil them into strong Proof-spirit according to Art.

The lesser quantity.

Take strong Proof-spirit 1 gallon, Aniseeds 3 ounces and a quarter, Caraway-seeds, Coriander-seeds, three drams; distil them into strong Proof-spirit according to Art.

CHAP.

CHAP. III. *Of Aniſeed Water.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Aniſeeds the beſt bruiſed five pound, diſtil them into ſtrong Proof-ſpirit; dulciſie it according to Art with five pound of white Sugar.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Aniſeeds the beſt bruiſed 8 ounces, diſtil them into ſtrong Proof-ſpirit; dulciſie it according to Art with 8 ounces of white Sugar.

Aniſeed water ſtrengtheneth the Stomach, breaketh flegm, and helpeth digeſtion.

It is alſo excellent againſt the Tiſick, and ſhortneſs of breath, and againſt wind in the Stomach and Body.

CHAP. IV. *Of Angelica Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Angelica roots a pound and a half, or Angelica hearb green 7 pound and a half, Aniſeeds 16 ounces; ſlice the roots thin, or bruiſe them and the ſeeds, diſtil them into ſtrong Proof-ſpirits; dulciſie with five pound of white Sugar.

The leſſer quantity.

Take ſtrong Proof-ſpirit 8 pound, Angelica roots 2 ounces and a quarter, or Angelica hearb green 12 ounces, Aniſeeds 1 ounce 5 drams; ſlice the roots thin, or bruiſe them and the ſeeds; diſtil them into ſtrong Proof-ſpirit; dulciſie with 8 ounces of Sugar.

Angelica water is very cordial, ſtrengtheneth the Stomach and inward parts: and is a good preſervative againſt the Plague and other infections.

CHAP. V. *Of Wormwood Water.*

The greater quantity.

Take ſtrong Proof-ſpirits 10 gallons, Aniſeeds bruiſed one

pound, Wormwood common, leaves and ſeeds, ſtript, and dry 2 pound; diſtil them into ſtrong Proof-ſpirit according to Art; dulcifie with white Sugar 5 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Aniſeeds bruiſed 1 ounce and 5 drams, Wormwood common, leaves and ſeeds ſtript, and dry 3 ounces and an half, diſtil them into ſtrong Proof-ſpirit according to Art; dulcifie with white Sugar half a pound.

Wormwood water conſumeth and breaketh Wind, killeth Worms, hindereth Vomiting, provoketh appetite, and ſtrengtheneth the Stomach.

It is alſo a great Cordial, and is very good againſt pains of the head proceeding of a cold cauſe.

CHAP. VI. *Of Balm Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Hearb-balm dry 3 pound, Aniſeeds 1 pound; diſtil them into ſtrong Proof-ſpirit according to Art; dulciſie with white Sugar what ſufficeth.

The leſſer quantity.

Take ſtrong Proof-ſpirit 8 pound, Hearb balm dry 4 ounces and an half, Aniſeeds 1 ounce 5 drams; diſtil them into ſtrong Proof-ſpirit according to Art; dulcifie with white Sugar eight ounces.

Balm water is good againſt the infirmities of the Mother, and is very comfortable for women in the time of their pains, to take a little of it, for the ſooner and ſafer provoking of a ſpeedy delivery.

It is alſo a Cordial and ſtrengtheneth the heart.

CHAP. VII. *Of Mint Water.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Spear Mint dry 3 pound, Aniſeeds beſt 1 pound, diſtil them into ſtrong Proof-ſpirit; dulcifie with white Sugar 5 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Spear-Mint dry four ounces

ounces and three quarters, Aniſeed 1 ounce and 5 drams; diſtil them into ſtrong Proof-ſpirit; dulcifie with white Sugar what ſufficeth.

Mint water comforteth and ſtrengtheneth the Stomach, Heart, Liver, and Spleen, helpeth concoction, and is good againſt vomiting.

CHAP. VIII. *Of Roſemary Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Roſemary ſtript and dry 30 ounces, Aniſeeds of the beſt 16 ounces; diſtil them into ſtrong Proof-ſpirit; dulcifie with white Sugar what ſufficeth.

The leſſer quantity.

Take ſtrong Proof-ſpirit 8 pound, Roſemary ſtript and dry 3 ounces, Aniſeeds of the beſt 1 ounce 5 drams; diſtil them into ſtrong Proof-ſpirit; dulcifie with white Sugar 8 ounces.

Roſemary water is very good againſt Dyſentery or Bloudy-flux proceeding of a cold cauſe, either drunk, or three ſpoonfuls thereof adminiſtred in a convenient Gliſter.

It alſo preſerveth from vomiting, ſtrengtheneth the Stomach, quickneth the Sight, and comforteth the Brain.

CHAP. IX. *Of Limon, or Orange Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Limon or Orange pils dry 30 ounces, Aniſeeds of the beſt 16 ounces; bruiſe the pils and ſeeds; diſtil them into ſtrong Proof-ſpirit according to Art, dulcifie with white Sugar 5 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Limon or Orange pils dry 3 ounces, Aniſeeds of the beſt 1 ounce 5 drams, bruiſe the pils and ſeeds; diſtil them into ſtrong Proof-ſpirit according to Art; dulcifie with white Sugar 8 ounces.

Limon water ſtrengtheneth and reviveth the feeble Spirits aromatizeth the Stomach, and is a great Cordial.

It alſo openeth obſtructions, exceedingly breaketh wind in the Stomach, is as an healing Balſam to all the inward parts, and is a great reſtorative to mans Nature.

CHAP. X. *Of Stomach water the leſs.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Spear-Mint dry, Lovage roots dry, Aniſeeds of each 1 pound, Calamus Aromaticus, Ginger, ſweet Fennel ſeeds, Imperatoria roots, Wormwood dry and ſtript, of each 8 ounces; Caraway ſeeds, Coriander ſeeds, of each 6 ounces; Cummin ſeeds, Cloves, of each three ounces; bruiſe them that are to be bruiſed: diſtil them into ſtrong Proof-ſpirit according to Art; dulciſie with white Sugar 5 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit 8 pound, Spear-Mints dry, Lovage roots dry, Aniſeeds of each 1 ounce 5 drams; *Calamus Aromaticus*, Ginger, ſweet Fennel ſeeds, Imperatoria roots, Wormwood dry and ſtript, of each 7 drams; Caraway ſeeds, Coriander ſeeds, of each 5 drams; Cummin ſeeds, Cloves, of each 2 drams and an half; bruiſe them that are to be bruiſed, diſtil them into ſtrong Proof-ſpirit according to Art; dulciſie with white Sugar 8 ounces.

CHAP. XI. *Stomach Water the greater.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, *Calamus Aromaticus* ſix ounces; *Guaiacum* green Bark, Aven roots dry, Galingale of each 4 ounces; Citron pils dry, Orange pils dry, white Cinamon, of each three ounces; Wormwood Common dry, Wormwood Roman dry, Spear-Mint, Roſemary tops, Coltmary, Sweet Marjoram, Wild Thyme, all dry, of each 2 ounces; Nutmegs, Cinamon, of each 2 ounces and an half; Cubebs, Cardamums, of each 1 ounce and an half; ſweet Fennel ſeeds, Coriander ſeeds, of each 5 ounces; Aniſeeds a pound and half: bruiſe them all that are to be bruiſed; diſtil them into ſtrong Proof-ſpirit; dulciſie with white Sugar ten pound according to Art.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, *Calamus Aromaticus* 5 drams, *Guaiacum*, green Bark, Aven roots dry, Galingale, of each

each 4 ounces; Citron pils dry, Orange pils dry, white Cinamon, of each 3 drams and a quarter; Wormwood Common dry, Wormwood Roman dry, Spear-Mint, Roſemary tops, Coſtmary, ſweet Marjoram, Wild Thyme, all dry, of each a dram and half; Nutmegs, Cinamon, of each 2 drams; Cubebs, Cardamums, of each a dram and a quarter; ſweet Fennel ſeeds, Coriander ſeeds, of each half an ounce; Aniſeed 2 ounces three drams: Bruiſe them all that are to be bruiſed, diſtil them into ſtrong Proof-ſpirit; dulciſie with white Sugar 16 ounces according to Art.

CHAP. XII. *Marjoram Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, ſweet Marjoram dry 3 pound, Aniſeeds 16 ounces, Caraway 4 ounces, *Calamus Aromaticus* 6 ounces; bruiſe them, diſtil and dulciſie with white Sugar what ſufficeth according to Art.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, ſweet Marjoram dry five ounces, Aniſeeds 1 ounce 5 drams; Caraway 3 drams and a quarter, *Calamus Aromaticus* 5 drams, bruiſe them, diſtil and dulciſie with white Sugar 8 ounces according to Art.

Marjoram water is good againſt the infirmities of the Liver and Spleen, cauſeth freeneſs of breathing, and ſtrengtheneth the Stomach and inward parts.

CHAP. XIII. *Uſquebach.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Aniſeeds 1 pound, Cloves 2 ounces, Nutmeg, Ginger, Caraway ſeeds, of each four ounces: diſtil them into ſtrong Proof-ſpirit according to Art; then add to the diſtilled water Licorice Spaniſh, Raiſins ſolis of each 2 pound; bruiſe the Licorice and Raiſins; dulciſie with brown Sugar 5 pound; ſtir them well together, and ſo let it ſtand ten dayes, and then (being fine) draw it off and keep it for uſe.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Aniſeeds 1 ounce 5 drams, Cloves a dram and half, Nutmeg, Ginger, Caraway ſeeds, of each 3 drams, diſtil them into ſtrong Proof-ſpirit according to Art; then add to the diſtilled water Licorice Spaniſh, Raſins ſolis, of each 3 ounces a dram and half; bruiſe the Licorice and Raiſins; dulciſie with brown Sugar 8 ounces, ſtir them well together, and ſo let it ſtand ten dayes, and then (being fine) draw it off and keep it for uſe.

Uſquebach cureth the infirmities of the Lungs, warmeth the Stomach, and cauſeth expectoration.

CHAP. XIV. *Balſamint Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Balſamint dry two pound, Aniſeeds beſt 1 pound, Caraway ſeeds 4 ounces, Limon pils dry 8 ounces; bruiſe them that are to be bruiſed, diſtil them into Proof-ſpirit; dulciſie with white Sugar five pound according to Art.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Balſamint dry 3 ounces a dram and half, Aniſeeds beſt one ounce 5 drams, Caraway ſeeds 3 drams, Limon pils dry ſix drams and an half; bruiſe them that are to be bruiſed; diſtil them into proof-ſpirit, dulciſie with white Sugar 8 ounces according to Art.

Balſamint water comforteth the Stomach and expelleth wind.

CHAP. XV. *Roſa ſolis.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Cinamon of the beſt 8 ounces, Cloves 2 ounces, Nutmegs, Ginger, Caraway ſeeds, of each 4 ounces, Marigold-flowers, Aniſeeds, of each 16 ounces; bruiſe them, diſtil them into ſtrong Proof ſpirit according to Art; then add to the diſtilled water Licorice Spaniſh 1 pound, Raiſins ſolis, Brown Sugar, of each 5 pound, Red Sanders four ounces; bruiſe the Licorice and Raiſins, ſtir them well together,

ther, and let them ſtand 12 dayes, then being clear it may be drawn for uſe.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Cinnamon of the beſt 6 drams and a half, Cloves a dram and half, Nutmegs, Ginger, Caraway ſeeds of each 3 drams, Marigold flowers, Aniſeeds, of each 1 ounce and 5 drams, bruiſe them, diſtil them into ſtrong Proof-ſpirit according to Art; then add to the diſtilled water Licorice Spaniſh an ounce 5 drams, Raſins ſolis, Brown Sugar, of each 8 ounces, Red Sanders 3 drams: bruiſe the Licorice and Raiſins, ſtir them well together, and let them ſtand twelve dayes, then being clear it may be drawn for uſe.

This Roſa ſolis is good againſt cold infirmities of the Stomach, helpeth digeſtion and expelleth wind.

CHAP. XVI. *Clove Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Cloves of the beſt 10 ounces, Aniſeeds 16 ounces, diſtil them into ſtrong Proof-ſpirit, dulcifie with white Sugar 5 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Cloves of the beſt 1 ounce, Aniſeeds 1 ounce and 5 drams: diſtil them into ſtrong Proof-ſpirit, dulcifie with white Sugar 8 ounces.

Clove water helpeth digeſtion, breaketh wind, provoketh Urine, comforteth the Heart, and ſtrengtheneth Stomach, Liver and all the inward parts.

CHAP. XVII. *Cinnamon Water Common.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Cinnamon of the beſt 5 pound, Aniſeeds 10 ounces; diſtil them into Proof-ſpirit according to Art, dulcifie with white Sugar 7 pound and a half.

The leſſer quanity.

Take ſtrong Proof-ſpirit what ſufficeth, Cinamon of the beſt 8 onnces,

8 ounces, Aniſeeds 1 ounce; diſtil them into Proof-ſpirit according to Art, duciſie with white Sugar 12 ounces.

CHAP. XVIII. *Cinamon water Imper.*

The greater quantity.

Take ſtrong Proof ſpirit what ſufficeth, Cinamon beſt large ten pounds; diſtil them into Proof-ſpirit according to Art, take white Sugar 12 pound and a half, Roſe-water four pound; make them into a Syrup, and dulcifie therewith according to Art.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Cinamon beſt large 16 ounces; diſtil them into Proof-ſpirit according to Art, take white Sugar 20 ounces, Roſe water 6 ounces 3 drams, make them into ſyrup, and dulcifie therewith according to Art.

Cinamon water is good againſt loathing of the Stomach, and a ſtinking breath.

It alſo ſtrengthneth the Heart, Liver, Lungs, and Spleen, and comforteth the Brain and Sinews.

CHAP. XIX. *Sweet Fennel ſeed Water.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, ſweet Fennel ſeeds five pound, Caraway ſeeds 4 ounces, Aniſeeds 16 ounces; diſtil them into Proof-ſpirit, dulcifie with white Sugar 5 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, ſweet Fennel ſeeds 8 ounces, Caraway ſeeds 3 drams, Aniſeeds an ounce and five drams; diſtil them into Proof-ſpirit, dulcifie with white Sugar 8 ounces.

Fennel water is good againſt the nauſeouſneſs of the Stomach, and eaſeth the pain thereof; digeſteth Flegm and expelleth Wind.

CHAP.

CHAP. XX. *Marigold Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Marygold flowers new gathered, pickt clean, 2 pecks heaped; bruiſe them, ſweet Fennel ſeeds, Aniſeeds, of each 10 ounces; diſtil them into ſtrong Proof-ſpirit, dulcifie with white ſugar five pound.

The leſſer qeantity.

Take ſtrong Proof-ſpirit 1 gallon, Marigold flowers new gathered, pickt clean, what ſufficeth, bruiſe them, ſweet Fennel ſeeds, Aniſeeds of each 1 ounce; diſtil them into ſtrong Proof-ſpirit, dulcifie with white ſugar 8 ounces.

Marigold water comforteth the inwards parts, and is good againſt infection.

CHAP. XXI. *Caraway Water.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Caraway ſeeds 30 ounces, Aniſeeds 10 ounces, Roſemary dry 4 ounces, Limon pils dry, Cloves of each 3 ounces; diſtil them into ſtrong Proof-ſpirit according to Art, dulcifie with white ſugar five pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Caraway ſeeds three ounces, Aniſeeds 1 ounce, Roſemary dry 3 drams, Limon pils dry, Cloves of each 2 drams and an half; diſtil them into Proof-ſpirit according to Art, dulcifie with white ſugar 8 ounces.

Caraway water is profitable againſt the cold grief of the Stomach, and Bowels, comforteth them and breaketh wind.

CHAP. XXII. *Nutmeg Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Nutmeg 20 ounces, Aniſeeds 10 ounces, bruiſe them, diſtil them into Proof-ſpirit according to Art, dulcifie with white ſugar 5 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon Nutmegs beſt 2 ounces, Aniſeeds 1 ounce; bruiſe them, diſtil them into Proof-ſpirit according to Art, dulcifie with white Sugar 8 ounces.

Nutmeg water comforteth the Spirits, diſcuſſeth wind, Aromatizeth the Stomach, cauſeth a ſweet breath, and provoketh Urine.

CHAP. XXIII. *Pretious Water.*

The greater quantity.

Take ſtrong Proof-ſpirit ten gallons,
the roots of Enula Campana Cyprus
Avens *Calamus Aromaticus*
Angelica Saſſafras of each 5 ounces:

Zedoary, Galingale, of each four ounces, *Caſſia lignea*, *Lignum Rhodium*, Yellow Sanders of each 3 ounces, Citron pils dry, Orange pils dry, of each 6 ounces; Cinamon White, Nutmegs, Mace, Ginger, of each five ounces, Cinamon beſt 20 ounces, Cloves, Cardamums, Cubebs, of each 2 ounces and a half, ſweet Chervile ſeeds, Baſil ſeeds, of each 3 ounces and an half, Coriander ſeeds, ſweet Fennel ſeeds of each ten ounces, Aniſeeds 20 ounces; bruiſe them, diſtil them into Proof-ſpirit, and dulcifie with fine Sugar 15 pound according to Art: Let it ſtand till it be fine, then draw it off, and add Muſk one dram: Ambergrieſe 4 drams: then let it clear and draw it for uſe.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth,
the roots of Enula Campana Cyprus
Avens Calamus Aromaticus,
Angelica Saſſafras, of each half an ounce;

Zedoary, Galingale, of each 3 drams, Caſſia lignea, Lignum Rhodium, Yellow Sanders, of each 2 drams and an half, Citron pils dry, Orange pils dry, of each 4 drams and 3 quarters; Cinamon White, Nutmegs, Mace, Ginger, of each half an ounce, Cinamon beſt 2 ounces, Cloves, Cardamums, Cubebs, of each 2 drams, ſweet Chervile ſeeds, Baſil ſeeds, of each three drams, Coriander ſeeds, ſweet Fennel ſeeds, of each 1 ounce, Aniſeeds 2 ounces; bruiſe them, diſtil them into proof-ſpirit, and dulcifie

ciſie with fine Sugar 24 ounces according to Art, let it ſtand till it be fine, then draw it off, and add Muſk ſix grains, Ambergrieſe 24 grains; then let it clear and draw it for uſe.

Pretious water is good againſt the Plague and Malignant Feavers: It alſo comforteth the Spirit, ſtrengthneth the Heart, preſerveth the Senſes, and relieveth languiſhing Nature.

CHAP. XXIV. *Wind Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Enula Campana roots dry, Aniſeeds of each 1 pound, Cyprus roots, Bark of the roots of Bay tree, or as much leaves, Saſſafras with the Bark, Cinamon white, of each 6 ounses, Calamus Aramaticus, Orange pils, dry of each 4 ounces, Clary, Red Mints, Calamint, Elder flowers, Camomile flowers of each 5 ounces, ſweet Fennel ſeeds, Caraway ſeeds, Angelica ſeeds of each 3 ounces and an half, Coriander ſeeds, Cardamums, Cubebs, Grains of Paradiſe, Cloves, Ginger, of each 2 ounces and a half, Pepper long and white of each 10 drams; bruiſe them all groſſely, diſtil them into ſtrong Proof-ſpirit according to Art, dulciſie with white Sugar 10 pound, draw it for uſe when it is perfectly clear.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Enula Campana roots dry, Aniſeeds, of each 1 ounce 5 drams, Cyprus roots, Barks of the root of Bay tree, or as much leaves, Saſſafras with the Bark, Cinamon white, of each 4 drams 3 quarters, Calamus Aromaticus, Orange pils dry, of each 3 drams, Clary, Red Mints, Calamint, Elder flowers, Camomile flowers, of each half an ounce, ſweet Fennel ſeeds, Caraway ſeeds, Angelica ſeeds, of each 3 drams, Coriander ſeeds, Cardamums, Cubebs, Grains of Paradiſe, Cloves, Ginger, of each 2 drams, Pepper long and white, of each 1 dram, bruiſe them all groſſely; diſtil them into ſtrong Proof-ſpirit according to Art, dulciſie with white Sugar 16 ounces, draw it for uſe when it is perfectly clear.

CHAP. XXV. *Water to procure Sweat.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Butter-bur-roots dry, 2 pound, Valerian, (common) roots, Aniſeeds, of each one pound, Vincetoxicum roots, Saſſafras roots, with the Bark of each 8 ounces, Angelica hearb dry, Cardus Benedictus, Great Valerian Hearb and Roots, all dry; Scordium, of each twelve ounces, Cowſlip flowers, Marigold flowers, of each 10 ounces, Juniper Berries 20 ounces; bruiſe them all, diſtil them into Proof-ſpirit according to Art; dulcifie with white Sugar ten pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Butter-bur-roots dry, 3 ounces a dram and half, Valerian (common) roots, Aniſeeds, of each 1 ounce 5 drams, Vincetoxicum roots, Saſſafras roots with the Bark, of each 6 drams and a half; Angelica hearb dry, Cardus Benedictus, Great Valerian hearb and Roots, all dry, Scordium, of each one ounce a dram and half; Cowſlip flowers, Marigold flowers, of each one ounce, Juniper Berries 2 ounces; bruiſe them all, diſtil them into Proof-ſpirit according to Art; dulcifie with white Sugar 16 ounces.

CHAP. XXVI. *Surfet Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Juniper berries two pound, Enula Campana roots dry 1 pound, Calamus Aromaticus, Galingale, of each 4 ounces, Wormwood, Spear Mint, Red Mint, all dry, of each 2 ounces and an half, Caraway ſeeds, Angelica ſeeds, of each 2 ounces, Saſſafras roots with the Bark, white Cinamon, of each 3 ounces, Nutmegs, Mace, Cloves, Ginger, of each 1 ounce, Red Popy flower 4 pound, Aniſeeds 2 pound and an half, bruiſe them all, diſtil them into ſtrong Proof-ſpirit, dulcifie with white Sugar 10 pound.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Juniper berries 3 ounces a dram

dram and half, Enula Campana roots dry 1 ounce 5 drams, Calamus Aromaticus, Galingale of each 3 drams, Wormwood, Spear Mint, Red Mint, all dry, of each 2 drams, Caraway seeds, Angelica seeds, of each a dram and a half, Sassafras Roots with the Bark, White Cinamon, of each two drams and an half, Nutmegs, Mace, Ginger, Cloves of each 3 quarters of a dram, Red Poppy flowers 6 ounces and a half, Aniseeds 4 ounces; bruise them all, distil them into strong Proof-spirit, dulcifie with white Sugar 16 ounces.

CHAP. XXVII. *Scorbutical Water.*

The greater quantity.

Take strong Proof-spirit 10 gallons, Horse Raddish roots dry 2 pound, Enula Campana roots dry, Aniseeds of each 1 pound, Water, Winter, Garden } Cresses,

Taragon, Balsamint, Scurvigrass (Garden) Wormwood, Brookelime, Trefoile (Water) Sweet Chervile, of each six ounce, Arsmart 8 ounce,

Mustard, Banck-cress, Rocket, Raddish } seed, of each 3 ounces,

Citron, Orange } pils dry

Cinamon White, Mace, of each 4 ounces: bruise them all, distil them into strong Proof-spirit according to Art, dulcifie with white Sugar what sufficeth for use; take 7 parts of this Spirit, and 1 part of juyce of Limons (or more) mingle them together, and dulcifie with white Sugar what sufficeth.

The lesser quantity.

Take strong Proof-spirit what sufficeth, Horse Raddish roots dry, 3 ounces a dram and half, Enula Campana roots dry, Aniseeds, of each 1 ounce 5 drams,

Water, Winter, Garden } Cresses,

Tarragon, Balſamint, Scurvygraſs (Garden) Wormwood, Brooklime, Trefoil (Water) Sweet Chervile, of each half an ounce and three quarters of a dram, Arſmart three quarters of an ounce and half a dram,

Muſtard
Bank-creſs
Rocket
Raddiſh } ſeeds of each 2 drams and an half,

Citron
Orange } pils dry,

Cinamon White, Mace, of each 3 drams and a quarter; bruiſe them all, diſtil them into ſtrong Proof-ſpirit, according to Art, dulciſie with white Sugar 1 pound for uſe; take 7 parts of this ſpirit, and 1 part of juyce of Limons (or more) mingle them together, and dulciſie with white Sugar what ſufficeth.

CHAP. XXVIII. *Plague Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Butter-bur-roots dry 1 pound, Garden Valerian roots dry, Common Valerian roots dry, Angelica roots, Imperatoria, Gentian, Enula Campana, Snakegraſs roots, of each ſix ounces, Contra Yerva, Zedoary, Galingale, of each 4 ounces, Rue leaves dry, White Horehound, Scordium, Carduus Benedictus, of each 5 ounces, Elder-flowers Lavender, Maces of each 3 ounces, Citron pils dry, Juniper berries, of each 8 ounces, Green Walnuts with the husks 1 pound, Venus Triacle, Mithridate, of each 2 ounces, Aniſeeds beſt a pound and half, Camphire 1 ounce; diſtil them into ſtrong Proof-ſpirit according to Art, dulciſie with white Sugar 10 pound; for uſe; let the party infected take of this water 1 ounce, mingled with warm Poſſet drink, (or any water proper in that caſe) and be kept very warm and ſweat well thereon.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Butterbur roots dry one ounce and 5 drams, Garden Valerian roots dry, Common Valerian roots dry, Angelica roots, Imperatoria, Gentian, Enula Campana,

Campana, Snake-graſs roots, of each half an ounce and three quarters of a dram, Contra Yerva, Zedoary, Galingale, of each 3 drams and a quarter, Rue leaves dry, White Horehound, Scordium, Carduus Benedictus, of each half an ounce, Elder flowers, Lavender, Mace, of each two drams and an half, Citron pils dry, Juniper berries, of each 6 drams and a half, Green Walnuts with the husks 1 ounce 5 drams, Venus Triacle, Mithridate, of each a dram and half, Aniſeeds beſt 2 ounces 3 drams and an half, Camphire 3 quarters of a dram; diſtil into ſtrong Proof-ſpirit according to Art; dulcifie with white Sugar what ſufficeth; for uſe; let the party infected take of this water one ounce mingled with warm Poſſet drink, (or any water proper in that caſe) and be kept very warm, and ſweat well thereon.

CHAP. XXIX. *Lavender Water.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Lavender leaves dry three pound, Lavender flowers dry 2 pound, Mace half a pound, or Nutmegs 1 pound, Lavender Cotten dry 2 pound, Stœchados half a pound; bruiſe them that are to be bruiſed, diſtil them into Proof-ſpirit according to Art, dulcifie with white Sugar what ſufficeth.

The leſſer quanity.

Take ſtrong Proof-ſpirit what ſufficeth, Lavender leaves dry 4 ounces 3 quarters and half a dram, Lavender flowers dry, three ounces a dram and half, Mace 6 drams and a half, Nutmeg one ounce 5 drams, Lavender Cotten dry 3 ounces a dram and half, Stœchados 6 drams and a half; bruiſe them that are to be bruiſed, diſtil them into Proof-ſpirit according to Art, dulcifie with white Sugar 16 ounces.

Lavender water helpeth the paſſions of the Heart, Palſies, Crampt, Apoplexies, and reſtoreth the ſpeech loſt.

CHAP.

CHAP. XXX. *Sage Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Great Sage dry three pound, Red Sage dry 2 pound, Lavender-flowers, Sage flowers, of each 1 pound, Lavender Cotten dry, Southernwood dry, of each 8 ounces, Nutmegs ten ounces; bruiſe or beat them as is moſt proper; diſtil them into Proof-ſpirit according to Art, dulcifie with white Sugar what ſufficeth.

The leſſer quantity.

℔ Take ſtrong Proof-ſpirit 1 gallon, Great Sage dry 4 ounces 3 quarters and half a dram, Red Sage dry 3 ounces a dram and a half, Lavender flowers, Sage flowers, of each 1 ounce a half and 1 dram, Lavender Cotten dry, Southern wood dry, of each ſix drams and a half, Nutmegs what ſufficeth: Bruiſe or beat them as is moſt proper; diſtil them into Proof-ſpirit according to Art, dulcifie with white Sugar 16 ounces.

Sage water is good for ſuch as are of a cold and flegmatique conſtitution, and for ſuch as are heavy and dull of ſpirit.

CHAP. XXXI. *Ros ſolis Proper.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Ros ſolis gathered in due ſeaſon, and clean pickt 4 pound, Juniper berries 3 pound, Saſſafras roots with the Bark, Caraway ſeeds, of each four ounces, Marigold flowers 1 pound, Aniſeeds 1 pound and an half; bruiſe them that are to be bruiſed, diſtil them into ſtrong Proof-ſpirit according to Art; Take hereof 7 pound; add thereto one pound of water treated of in the 23 Chapter, dulcified, Licorice bruiſed one pound, dulcifie with white Sugar ten pound: If you add none of the aforeſaid water, then in ſtead thereof take Muſk 1 dram, Ambergriefe 3 drams, colour it with the tincture of July flowers, or Roſes what ſufficeth, according to Art.

The leſſer quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Ros ſolis gathered in due

due ſeaſon, and clean pickt, ſix ounces 3 drams and a quarter, Juniper berries 4 ounces 6 drams and a half, Saſſafras roots with the Bark, Caraway ſeeds, of each 3 drams and a quarter, Marigold flowers 1 ounce a half and 1 dram, Aniſeeds 2 ounces 3 drams and a half; bruiſe them that are to be bruiſed, diſtil them into ſtrong Proof-ſpirit according to Art; Take hereof ten ounces 1 dram and a half; add thereto 1 ounce 5 drams of the water treated of in the 23 Chapter, dulcified, Licorice bruiſed 1 ounce 5 drams; dulcifie with white Sugar what ſufficeth; If you add none of the aforeſaid water, then in ſtead thereof, take Musk ſix grains, Ambergrieſe 8 grains; colour it with the tincture of July flowers, or Roſes what ſufficeth, according to Art.

Roſ ſolis proper, openeth obſtruction, relieveth decaying Nature, comforteth the Stomach, quickneth Appetite, and is good againſt the Falling-ſickneſs.

CHAP. XXXII. *Water of Flowers.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, and put it into a wide mouthed Pot, (or other Veſſel) ſtopt very cloſe Take thoſe ſeveral flowers following in their ſeaſons, and being clean pickt, put them to the ſpirit in the Pot, *viz.* Cow-ſlips, Wood-bind, Stock-gilly flower of all three ſorts,

Damask, Musk } Roſes,
Sweet Brier flowers, Clove July-flowers, Lilium Convallium,
Jaſmine, Citron, Orange } flowers, or pils dry,
Tillia Flowers,
Garden, Limon, Wild } Thyme flowers,
Lavender, Marigold, Chamomile, Melilot, Elder } Flowers, of each half a pound;

Being furniſhed with all your flowers as above, when you would diſtil them, add to them Aniſeeds 2 pound, Coriander 1 pound; bruiſe the ſeeds; it were beſt to bruiſe all the flowers, as you put them up into the ſpirit, for their more orderly working; diſtil them into ſtrong Proof-ſpirit according to Art; then add to the diſtilled water, Roſes, July flowers, Elder flowers, of each 1 pound: after twelve days infuſion it may be drawn off; then dulcifie it with white Sugar 10 pound, and being fine, it may be drawn for uſe.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, and put it into a wide mouthed pot (or other veſſel) ſtopt very cloſe; take thoſe ſeveral flowers following in their ſeaſons, and being clean pickt, put them to the ſpirit in the pot: *viz.* Cowſlips, Wood-bind, Stock Gilly flowers of the 3 ſorts,

Damak, Muſk } Roſes;

Sweet Brier flowers, Clove July flowers, Lilium Convallium, Jaſmine, Citron, Orange } flowers, or pils dry,

Tillia flowers,

Garden, Limon, Wild } Thyme flowers,

Lavender, Mirigold, Chamomile, Melliloc, Elder } Flowers, of each 6 drams and a half,

Being furniſhed with all your flowers as above, when you would diſtil them, add to them Aniſeeds 3 ounces a dram and half, Coriander 1 ounce 5 drams: bruiſe the ſeeds; it were beſt to bruiſe all the flowers, as you put them up into the Spirit, for their more orderly working, diſtil them into ſtrong Proof-ſpirit according to Art; then add to the diſtilled water Roſes, July flowers, Elder-flowers, of each 1 ounce 5 drams: after 12 days infuſion it may be drawn off; then dulcifie it with white Sugar 1 pound, and being fine it may be drawn for uſe.

CHAP.

CHAP. XXXIII. *Water of Fruits.*

The greater quantity.

Take ſtrong Proof-ſpirit 10 gallons, Juniper-berries 4 pound, Quince parings dry, Pippin parings dry, of each 2 pounds, Limon pils, Orange pils dry, of each 1 pound; Nutmegs four ounces, Aniſeeds 2 pounds, Cloves 2 ounces; diſtil them into Proof-ſpirit according to Art; to the ſpirit add Straw-berries, Raſpices bruiſed, of each 5 pound; ſtir them well together, and after ten days it being clear, may be drawn off; then dulcifie with ſyrup made as is hereafter taught, and ſo let it ſtand till it be clear, and then draw it off for uſe.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Juniper-berries 6 ounces 3 drams and a quarter, Quince parings dry, Pippin parings dry, of each 3 ounces a dram and a half, Limon pils, Orange pils dry, of each 1 ounce 5 drams, Nutmegs 3 drams and a quarter, Aniſeeds 3 ounces a dram and half, Cloves a dram and half; diſtil them into Proof-ſpirit according to Art; to the ſpirit add Straw-berries, Raſpices bruiſed, of each 8 ounces; ſtir them well together; and after 10 days, it being clear, may be drawn off; then dulcifie it with ſyrup made as is hereafter taught, and ſo let it ſtand till it be clear, and then draw it off for uſe.

CHAP. XXXIV. *Aven Water.*

The greater quantity.

Take ſtrong Proof-ſpirit what ſufficeth, Aven roots 4 pound, Orris roots, Nutmeg Yellow Sanders, Mace, of each 2 ounces, Lignum Rhodium, Saffron, Storax, Benjamine, of each 1 ounce, Angelica roots 3 ounces, Limon pils green half a pound, Sweet Fennel ſeeds, Aniſeeds, of each 1 pound, Cloves 10 drams, Roman Wormwood, Mint dry, of each 3 handfuls; Red Roſes, Stœchas flowers, of each 4 handfuls, Sweet Marjoram, Balm, Burnet, Thyme, all dry, of each 6 handfuls, Alkermes berries 2 ounces; bruiſe them all that are to be bruiſed, diſtil them into Proof-ſpirit according to Art, dulcifie with ſyrups

thus made; Take Roſewater 4 pound, white Sugar 10 pound, boil it to a ſyrup height; then ſtrain it, and put it to the fire again; add thereto confection of Alkermes 4 ounces, Syrup of Gilly flowers 1 pound, Ambergrieſe (diſſolved in Roſe water) 1 dram; and ſo let theſe boil a little, till they be incorporated with the Syrup, and ſo keep it for uſe.

The leſſer quantity.

Take ſtrong Proof-ſpirit 1 gallon, Aven roots 6 ounces 3 drams and a quarter, Orris roots, Nutmeg Yellow Sanders, Mace of each a dram and half, Lignum Rhodium, Saffron, Storax, Benjamin of each 3 quarters of a dram, Angelica roots 2 drams and a half; Limon pils green 6 drams and a half, Sweet Fennel ſeeds, Aniſeeds, of each 1 ounce 5 drams, Cloves 1 dram, Roman Wormwood, Mint dry, of each what ſufficeth, Red Roſes, Stœchas flowers, of each what ſufficeth, Sweet Marjoram, Balm, Burnet, Thyme, all dry, of each what ſufficeth, Alkermes berries a dram and half; bruiſe them all that are to be bruiſed; diſtil them into Proof-ſpirit according to Art, dulciſie with Syrups thus made; Take Roſe water 6 ounces 3 drams and a quarter, White Sugar 1 pound; boil it to a Syrup height, then ſtrain it, and put it to the fire again; add thereto Confection Alkermes 3 drams and a half, Syrup of Gilly flowers 1 ounce 5 drams, Ambergrieſe (diſſolved in Roſe water) 6 grains; and ſo let theſe boil a little, till they be incorporated with the Syrup, and ſo keep it for uſe.

Avens water is a great Cordial, ſtrengtheneth the Spirit, comforteth all the inward parts, and preſerveth from Conſumptions, and Melancholy ſadneſs.

Additions

Additions to inrich theſe precedent Chapters, to which (by Numbers) theſe are referred.

Additions to the firſt and ſecond Chapters.

TAke July flowers, Roſes, Poppy and Sanders, or any of them ſeverally, what ſufficeth; and infuſe them in Aqua-vitæ, or Proof-ſpirit, till the tincture be drawn out; then draw off the ſpirit, and reſerve it (cloſe ſtopt) for uſe: When you have occaſion to uſe it, take 8 ounces thereof to 7 pound and a half of this Water, and you will give it a ſufficient colour; or you may take more at pleaſure without inconveniency.

Additions to the third Chapter.

The greater quantity.

Take Aniſeeds, White Sugar, of each five pound, or what ſufficeth, according to Art.

The leſſer quantity.

Take Aniſeeds, White Sugar, 8 ounces, according to Art.

Additions to the fourth Chapter.

The greater quantity.

Take Caraway ſeeds, Coriander ſeeds, of each 3 ounces, Calamus Aromaticus, Zedoary, of each 4 ounces, Aniſeeds, Caſſia lignea, of each 8 ounces, Angelica Roots 8 ounces, (or Hearb Angelica 2 pound) white Sugar 2 pound and half, or what ſufficeth.

The leſſer quantity.

Take Caraway ſeeds, Coriander ſeeds, of each 2 drams and a half, Calamus Aromaticus, Zedoary, of each 3 drams and 3 quarters, Aniſeeds, Caſſia lignea, of each 6 drams and a half, Angelica roots 6 drams and a half, or Herb Angelica 3 ounces a dram and half, White Sugar 4 ounces, or what ſufficeth.

Additions to the fifth Chapter.

The greater quantity.

Take Cinamon, Cubebs of each 4 ounces, Sweet Fennel ſeeds, Aniſeeds of each 8 ounces, Cloves, Caraway ſeeds, Nutmegs, of each 3 ounces, Wormwood dry 10 ounces, White Sugar 2 pounds and a half, (or what ſufficeth).

The leſſer quantity.

Take Cinamon, Cubebs, of each three drams and a quarter, Sweet Fennel ſeeds, Aniſeeds, of each 6 drams and a half, Gloves, Caraway ſeeds, Nutmegs, of each 2 drams and a half, Wormwood dry 1 ounce, white Sugar 4 ounces, (or what ſufficeth.)

Additions to the ſixth Chapter.

The greater quantity.

Take Garden Thyme, Penny-royal of each 3 handfuls, Cardamums 2 ounces, Sweet Fennel ſeeds, Aniſeeds, of each eight ounces, Balm dry 1 pound, Nutmeg, Ginger, Calamus Aromaticus, Galingale, Cinamon, of each 4 ouuces.

The leſſer quantity.

Take Garden Thyme, Penny-royal, of each what ſufficeth; Cardamums a dram and half, Sweet Fennel ſeeds, Aniſeeds, of each 6 drams and an half, Balm dry 1 ounce 4 drams, Nutmegs, Ginger, Galamus Aromaticus, Galingale, Cinamon, of each 3 drams and a quarter.

Addi-

Additions to the ſeventh Chapter.

The greater quantity.

Take Spear Mint dry, Aniſeeds, of each one pound, Calamus Aromaticus 4 ounces, White Sugar 2 pound and a half.

The leſſer quantity.

Take Spear Mint dry, Aniſeeds, of each 1 ounce 5 drams, Calamus Aromaticus 3 drams and a quarter, White Sugar four ounces.

Additions to the eight Chapter.

The greater quantity.

Take Sweet Fennel ſeeds, Cinamon, of each 8 ounces, Aniſeeds, Roſemary dry of each 1 pound, Caraway 2 ounces, Spear Mint dry 2 handfuls, White Sugar 2 pound and a half.

The leſſer quantity.

Take Sweet Fennel ſeeds, Cinamon of each 6 drams and a half, Aniſeeds, Roſemary dry, of each 1 ounce five drams, Caraway 1 dram and a half, Spear Mint dry what ſufficeth, white Sugar 4 ounces.

Additions to the ninth Chapter.

The greater quantity.

Take Caraway ſeeds 4 ounces, Aniſeeds, Limon pils dry, of each 1 pound, White Sugar 2 pound and a half; in like manner and quantity make your Compoſition, with Orange pils dry according to Art.

The leſſer quantity.

Take Caraway ſeeds 3 drams and 3 quarters, Aniſeeds, Limon pils dry, of each 1 ounce 5 drams, white Sugar 4 ounces; In like manner and quantity make your Compoſition with Orange pils dry, according to Art.

Additions to the twelfth Chapter.

The greater quantity.

Take Cinamon 5 ounces, Cloves 2 ounces, Limon pils dry 3 ounces, Sugar 2 pound and a half.

The leſſer quantity.

Take Cinamon half an ounce, Cloves a dram and half, Limon pils dry, 2 drams and a half, Sugar 4 ounces.

Additions to the fourteenth Chapter.

The greater quantity.

Take Sweet Fennel, Cinamon, of each 5 ounces, Nutmeg 3 ounces, Sugar 2 pound and a half.

The leſſer quantity.

Take Sweet Fennel, Cinamon of each 4 drams, Nutmegs 2 drams and a half, Sugar 4 ounces.

Additions to the fifteenth Chapter.

Take and add to the ſpirit half as much as the rule of every particular Ingredient therein expreſſed, and in ſtead of Sanders give it the tincture of Roſes, July flowers, or Poppy, what ſufficeth according to Art.

Additions to the eighteenth Chapter.

The greater quantity.

Take Muſk, Ambergrieſe, of each half a dram, White Sugar Candy in ſtead of common white Sugar, what ſufficeth according to Art. In reſpect that Muſk in ſome caſe, may give offence to the receiver: It is requiſite to omit the uſe thereof in ſome of your waters of this kind, to ſerve for ſuch ſpecial uſes.

The leſſer quantity.

Take Muſk, Ambergrieſe of each 3 grains, White Sugar Candy in ſtead of Common white Sugar, what ſufficeth according

ding to Art. In reſpect that Musk for ſome cauſes may give offence to the receiver, it is requiſite to omit the uſe thereof in ſome of your waters of this kind to ſerve for ſuch ſpecial uſes.

Additions to the nineteenth Chapter.

The greater quantity.

Take Sweet Fennel ſeeds 3 pounds, Caraway ſeeds four ounces, Aniſeeds 1 pound, Cinamon eight ounces, Cloves 2 ounces, Sugar 2 pounds and a half.

The leſſer quantity.

Take Sweet Fennel ſeeds 8 ounces, Caraway ſeeds 3 drams and a quarter, Aniſeeds 1 ounce 5 drams, Cinamon 6 drams and a half, Cloves a dram and half, Sugar 4 ounces.

Additions to the twentieth Chapter.

The greater quantity.

Take Cinamon, Sweet Fennel of each 5 ounces, Caraway, Cloves of each 2 ounces, Marigold 2 gallons, Sugar 2 pounds and a half.

The leſſer quantity.

Take Cinamon, Sweet Fennel, of each 4 drams, Caraway, Cloves of each a dram and half, Marigolds what ſufficeth, Sugar 4 ounces.

Additions to the twenty third Chapter.

The Syrup for duleifying the water is thus to be made.

Take Apricocks, Quinces, Cherries, Engliſh Currants, of each what ſufficeth, all full ripe, and of equal weight; when they are thus prepared as followeth.

Prepare the Quinces and Apricoks, and take out the ſtones, and kernels, and ſlice them very thin, ſtone the Cherries and bruiſe them and the Currants; then lay them into a flat Baſon; or Pan thus: a lane of fruit of a fingers thickneſs: and then a lane of White powder Sugar of like thickneſs: and ſo pro-

ceed in order lane upon lane till all be laid into the Baſon: then pour on good *Aqua vitæ* gently, till all be covered therewith; and ſo let it ſtand 2 hours; then bruiſe or poſh them all together, and preſs out the juyce as dry as poſſibly you can through a thick linnen bag: Then take the juyce, and let it ſtand till it be ſetled clear, which juyce by a gentle exhalation in a hot bath, boyl up to a ſyrup height according to Art, and keep it for uſe. To every eight pound of the Spirit, put a pound of this Syrup, and when it is clear draw it off for uſe.

The Furnace uſed in the drawing off the preceding Spirits and waters.

A, *Sheweth the bottome which ought to be of Copper.*

C, *The barel filled with cold water, to refrigerate & condenſate the water and Oyl that run through it.*

D, *A pipe of braſs or pewter, or rather a worm of Tin running through the barrel.*

E, *The Alembick ſet in the furnace with the fire under it.*

Excellent

Excellent Waters for ſeveral Uſes.

CHAP. I. *A Water to cauſe Hair faln to grow again.*

TAke Mountain Hyſop, Mountain Calamint, leaves of Southernwood, of each two handfuls, Canary Wine, Urine, Hony, Milk, of each two pound, Muſtard ſeed half a pound; bruiſe what is to be bruiſed, macerate them three days, then diſtil them in *Balneo*.

CHAP. II. *A water to cauſe Hair taken off never to grow again.*

Take ſeeds of Henbane bruiſed 2 pound, lay it a while in ſome moiſt place; then add great Stone-crop half a pound; diſtil it according to Art.

Another.

Take blond of Frogs, Terræ Sigillatæ, Sumach, Roſes, Sorrel, Houſleek, what is ſufficient; macerate them together 24 hours, then diſtil them in *Balneo*.

CHAP. III. *A Water to take away Spots in the Face.*

Take Aſſes Milk four pounds, white Wine 1 pound, the inſide of two new loaves, 12 Eggs with the ſhels, Sugar Candy 3 drams; mix them well together and diſtil them.

CHAP. IV. *A water againſt Scabs.*

Take Sorrel water 2 pounds, Juice of Plantain 8 Roſe water, of each 4 ounces, Juice of Limons 2 ounces, Lytharge 6 ounces, Ceruſe, Sublimate, of each half an ounce, Sulphure vive 3 drams; bruiſe them that are to be bruiſed; then infuſe them 24 hours; and after diſtil them according to Art.

CHAP. V. *A water to preſerve the Sight.*

Take Fennel, Vervaine, Eye-bright, Endive, Betonie, Red Roſes, Venus Hair, of each three handfuls; bruiſe the Hearbs, and macerate them 24 hours in White Wine, (as much as is ſufficient) then diſtil them in a limbeck in *Balneo.*

Another.

Take Fennel, Celandine, Sage, Roſemary, Vervain, Rue, of each equal parts: Prepare it as before.

CHAP. VI. *A water to reſtore the ſight decayed.*

Take Fennel, Celandine, Vervaine, Rue, Leaves of Enula, Fullers Teaſel, Milfoil, of each one handful, Camphire half a dram; bruiſe them and diſtil them in an Alembick.

CHAP. VII. *A water againſt the Gout.*

Take Licorice half a pound, Aniſeeds 1 pound, Cinamon three ounces, Galingale, Ginger, Roots of Ireos, Enula Campana, Seeds of Fennel, Caraway, Amomum, Ammi Piony, Baſil, Savory, Marjoram, of each one ounce; Juniper Berries 2 ounces, Ground Ivie half a handful, Long Pepper, Calamus, Spikenard, Mace, of each 3 drams, Valerian 1 dram, Roots of Angelica half an ounce, Cyprus 4 ounces, Lignum Aloes half an ounce, Sugar 4 ounces, Malaga wine, or ſtrong Ale 32 pounds; prepare and diſtil them according to Art.

This water taken inward'y ſtrengthens cold and weak Stomachs and breaks the Stone.

Outwardly applyed it eaſeth the Gout, enlargeth Senews that are ſhrunk, and is good againſt all aches and paſſions proceeding from melancholy and cold.

CHAP. VIII. *A water for the Web and Spots in the Eyes.*

Take Rue, Plantain, Red Roſes, Red Poppies, Vervaine, Celandine leaves, of each 1 ounce; Red Roſe water 1 pound, Rich white Wine 1 pound and an half, Tutia prepared 1 dram, Aloes Hepatick an ounce and an half, Cloves 1 ounce, Powder, prepare and diſtil them according to Art; Drop the water into the Eyes morning and evening.

CHAP. IX. *A water for Tetters, Fiſtulaes, Cankers, &c.*

Take ſtrong white Wine Vinegar 8 pounds, Wood Aſhes one pound, Infuſe them 3 dayes natural, and ſtir them twice a day; then put thereto unſlaked lime 1 pound, let it ſtand other three dayes, and ſtir it as before, when it is well ſetled, Filtre off the clear Lee, and put thereto Sal Gemme, Salt Alkali, Salt Armoniack, Salt of Tartar, of each one dram; Calx of Egge-ſhels, Calx vive, of each 1 dram; grind all theſe together, and temper them with the ſaid Lee; put them into a Glaſs lembick, and diſtil them in *Balneo*; give it the firſt 24 hours no more heat than will make it, and keep it warm: after that diſtil it off according to Art.

CHAP. X. *A water againſt redneſs of the Face, and to beautifie the Skin.*

Take Wild Purſlain, Mallows, Nightſhade, Plantain with the ſeeds, of each three handfuls; the Whites of 12 Eggs, Limons number 12, Roch Allum 4 ounces; prepare and diſtil them according to Art.

Another.

Take Calx of Egge ſhels, White Coral pulverized, of each 2 ounces, Salt calcinated, and Borax of each 6 ounces, Gum Tragagant 5 ounces, Roots of white Lilies number 6, White Sope 8 pounds, Styrax, Calamita, Belzoin, of each 4 ounces; mix and diſtil them by Alembick.

Another of the ſame vertue.

Take Wine Vinegar half a pound, Lytharge of gold 1 ounce and a half, Ceruſe 1 ounce, Sal Gem 6 drams, Roch Alum half an ounce, Borax, Sulphur vive, Salt Nitre of each three drams, Camphire half a dram; prepare and diſtil them according to Art.

CHAP. XI. *A water againſt the inordinate Flux of Tearr.*

Take ripe Strawberries as many as you pleaſe, ſet them to digeſt in Horſe-dung 15 days; then diſtil them in *Balneo.*

Or thus,

Take Flowers of the white Thorn, Leaves or tops of the Willow, Eye-bright, of each what ſufficeth, diſtil them as before.

CHAP. XII. *A water againſt the Redneſs of the Eyes.*

Take juyce of Celandine, Rue, Vervain, Fennel, of each three ounces; tops and leaves of Roſes of each what ſufficeth, Sugar Candy 3 ounces, of the beſt Tutia, Sanguis Draconis, of each four ounces; bruiſe them that are to be bruiſed, and diſtil them according to Art.

CHAP. XIII. *A water to cleanſe and dry a ſharp Ulcer.*

Take Crude Allum 2 ounces, whites of Egges, number 15. Juice of Purſlain, Plantain, Nightſhade, Nicotian, Houſleek, Water of Meadſweet, Trinity Graſs, Roſes, of each 4 ounces; Labour them well together, and draw off the Water by an Alembick of Glaſs in *Balneo.*

CHAP.

CHAP. XIV. *A water to make the Teeth white.*

Take Allum 6 ounces, Common Salt 3 ounces, Myrrhe, Maſtick, Cloves, of each 6 drams; mix, bruiſe and diſtil them according to Art.

CHAP. XV. *A Water to take away the marks of the Small Pox.*

Take Maſtick, Myrrhe, Aloes Hepatick, Nard, Sanguis Draconis, Olibanum, Opopanax, Bdelium, Carpobalſamum, Saffron, Gum Arabick, Liquid Storax, of each 2 drams and a half; Beat what is to be beaten; then add thereto of clear Turpentine equal weight: diſtil them according to Art.

CHAP. XVI. *A Water to Cicatrize Ulcers.*

Take red Wine 2 pound, Plantain water half a pound, Roſe water four ounces, Juice of Plantain, Vervain, Shepheards Purſe, Knotgraſs, Centaury the leſs, Comfery the greater and leſſer, of each 2 ounces; Crude Allum 1 pound, Cypreſs Nuts 3 ounces, Pomgranate flowers half an ounce, Pomgranate pils ounces, Gals half an ounce, Bark of the Oak, Sumach, of each five drams, Turpentine 3 ounces, Crude Honey half a pound, Maſtick, Olibanum, of each ten drams, Sarcocol two ounces, Burnt Vitriol, Burnt Lead, of each 1 dram, Bole Armoniack 3 ounces, Caſſia lignea half an ounce, Round Birthwort 3 ounces: Powder what is to be powdred, then mix and diſtil them.

Another.

Take Maſtick, Myrrhe, Olibanum, Sarcocol, Mummie, of each 3 drams, Frankincenſe 1 ounce, Nutmegs, Cinamon, Cloves, Cubebs, of each 2 drams, Cyprus Nuts half an ounce, flowers of Pomgranates, Barks of Pomgranates, of each 1 dram; Bole Armoniack 1 ounce, Red Roſes 3 drams, Roch Allum 1 pound, Vitriol 7 drams, Clarified Honey 1 ounce, Aqua vitæ a pound and half white Wine 1 pound, Juyce of Plantain, Nightſhade, Comfrey.

fery of the greater and leſſer, of each 4 ounces, Water wherein Iron hath been quenched 4 pounds; powder what is to be powdred, and infuſe them all night in Aqua vitæ, in the morning draw forth the water by Alembick.

CHAP. XVII. *A Water for Ulcers.*

Take White Wine 4 pounds, Plantain water 2 pounds, Allum half a pound, White Copperas 5 ounces, Crude Honey 1 pound, Licorice Raſped 1 pound, Bole Armoniack 5 ounces, Camphire an ounce and half, Mercury ſublimated 2 drams; Bruiſe what is to be bruiſed, and diſtil them by Alembick.

CHAP. XVIII. *A Water for hollow Ulcers.*

Take Fountain water, Red Wine, of each 2 pounds and a half, Red Roſes four ounces; Flowers & Rinds of Pomgranates, of each two ounces and a half, Sumach 2 ounces, Sage a handful, Comfery the greater and leſſer of each half a handful, Sarcocol 3 ounces, Maſtick 2 ounces, Olibanum 1 ounce, Honey 1 pound, water of Turpentine a pound and a half; bruiſe what is to be bruiſed, and diſtil them through a Lembick of Glaſs with a gentle fire.

CHAP. XIX. *A Cicatrizing Water.*

Take water wherein Iron hath been quenched four pounds, Aqua Balſami veri four pounds, Turpentine a pound and half, Crude Honey 1 pound, Allum 10 ounces, white Coperas five ounces, Bole Armoniack 7 ounces, Mercury ſublimated half a dram, leaves of Plantain, Comfery the greater, middle and leſſer, Teaſil, Knotgraſs, St. Johns Wort, of each a handful and a half, Frankincenſe 2 ounces, Olibanum, White Sanders, of each half an ounce, Red Roſes a handful and a half, Caſſia Lignea, Cinamon, of each 3 drams; for the firſt diſtillation; then take Turpentine 1 pound, Maſtick 3 drams, pure Rozen 6 ounces, Cinamon, Cloves, of each 2 drams; Pomgranate rinds half an ounce, Cyprus Nuts 1 ounce and a half, White Coperas:

Coperas two ounces, Allum 3 ounces, Olibanum 4 ounces, Sanguis Draconis an ounce and a half, Aqua Balſam. veri 1 pound for the ſecond diſtillation: Afterwards,

Take Flowers of St. Johns Wort, Sage, Roſemary, Carduus Benedictus, Centaury, of each 1 ounce, Maſtick, Red Sanders, of each 3 drams, Wood of Aloes 2 ſcruples, Cubebs one dram, Aqua vitæ half a pound, Burnt Allum, White Tartar, of each an ounce and a half, Myrrhe half an ounce, Earth Worms in powder 1 dram, the middle bark of the Oak 6 ounces, Caſſia lignea 3 drams, White Copperas 1 ounce, Rindes of Pomgranates half an ounce, Cinamon 2 drams, Flowers of Pomgranates 1 dram, Guaiacum 4 ounces, Carpobalſamum, Xylobalſamum, of each 1 dram, Myrtles, Mummie, of each 2 drams, Borax half an ounce, Cloves two drams, Tormentil, Gentian, Round Birth-wort, of each two drams and a half: This is for the laſt diſtillation; afterwards add Burnt Allum half an ounce, White Copperas 2 drams, Maſtick 1 ounce in fine powder, and then keep it for uſe.

CHAP. XX. *A water for hollow Wounds.*

Take Fountain water, Red Wine, of each 2 ounces and an half, Red Roſes 4 ounces, Pomgranate flowers, Pomgranate rindes, of each 2 ounces and a half, Sumach, 2 ounces, Sage 1 handful, both the Comferies, of each a handful, Allum half a pound, Sarcocol 3 ounces, Maſtick 2 ounces, Olibanum 1 ounce, Honey 1 pound, water of Turpentine a pound and a half. Prepare the Ingredients according to Art, and then diſtil them all together in a Glaſs lembick with a gentle fire.

CHAP. XXI. *A Water for Wounds and Ulcers.*

Take Calx vive extinct in Fountain water 8 pounds, Plantain water 4 ounces, Roſe water 2 pounds. Heat all theſe together, afterward let them ſtand and clear, pour forth all the clear to the Lembick, and put to it Honey 2 pounds, Allum 1 ounce, Borax, Maſtick, of each three ounces, Olibanum 4 ounces, the middle Bark of the Oak dryed 3 ounces, powder what is to be powdred and diſtil them according to Art.

CHAP. XXII. *A water to make the Teeth white.*

Take the firſt diſtilled water of Honey which is white, one pound, Allum half a pound, Sal Nitre, White Salt, of each one ounce, Water of Lentisk leaves 1 pound, Maſtick two ounces, White Vinegar, White Wine, of each 2 ounces. Mix and diſtil them according to Art, and reſerve the water.

CHAP. XXIII. *A water againſt the Colick.*

Take Muſcadel, or Malmſey four pound, Nutmegs, Galls, of each 1 dram, Cinamon, Cloves, Grains, of each 2 drams. Powder the ingredients groſsly, and infuſe them in the Wine 24 hours, then with a ſoft fire draw off the water according to Art.

CHAP. XXIV. *A water for a cold Stomach.*

Take Citron and Orange pils dryed, of each 2 ounces, Roſemary, Mints, of each one handful, Cinamon, Cloves, Cubebs, Cardamums, Nutmegs, Ginger, of each a dram and a half, Sage, Pennyroyal, Thyme, of each one handful, Caraway ſeeds, Aniſeeds, Fennel ſeeds, of each 4 drams: Bruiſe what is to be bruiſed, and infuſe them all the ſpace of 24 hours in Canary wine four pints; then diſtil them in *Balneo* according to Art.

CHAP. XXV. *Water of Sage Compound.*

Take Sage, Marjoram, Thyme, Lavender, Epithymum, Betony, of each 1 ounce, Cinamon half an ounce, Ireos, Roots of Cyprus, Calamus Aromaticus, of each 1 ounce, Storax, Benjamin, of each a dram and a half; infuſe them four days in four pounds of Spirit of Wine; then diſtil them in *Balneo*.

CHAP. XXVI. *Lavender water Compound.*

Take flowers of Lavender, Lilly of the Valley, of each 24 handfuls

handfuls, Piony, Tillia, Flowers of Roſemary, Sage, of each half a handful, Cinamon, Ginger, Cloves, Cubebs, Galingale, Calamus Aromaticus, Mace Meſſelto of the Oak, of each a dram and a half. Piony roots one ounce and a half, of the beſt Wine what ſufficeth, infuſe them in Wine two dayes; then diſtil them in *Balneo Mariæ*.

The water is good againſt the Falling-ſickneſs, Convulſion fits, and the infirmities of the Brain.

CHAP. XXVII. *A Pectoral Water.*

Take Liver of a Calf, the Lungs of a Fox, of each number 1, Liverwort, Longwort, Sage, Rue, Hyſſop, of each one handful, Roots of Enula, Gladiol, of each half an ounce, Seeds of Aniſe, Caraway, Fennel, of each half an ounce, Flowers of Borage and Bugloſs, of each 2 drams; infuſe them the ſpace of 24 hours in rich old Wine what ſufficeth. Water of Scabius, Carduus Benedictus, of each four ounces, Hyſop 2 ounces; then diſtil it in *Balneo Mariæ*.

Another.

Take leaves of Scabius, Veronica, of each two handfuls, Venus Hair, Sage, Hyſop, Horehound, Liverwort, Licorice, of each one handful; Flowers of Borage, Bugloſs, Violets, of each half a handful, Roots of Enula Campana, Licorice, Flowers of Ireos, of each half an ounce, Aniſeeds, Fennel ſeeds, of each 1 dram, Choyſe Cinamon, Oriental Saffron, of each half a dram; let them be bruiſed and cut, let them be digeſted two days in water of Scabius Veronica, of each one pound, water of Hyſop half a pound, White Wine 3 pounds, and be diſtilled in *Balneo Mariæ*; and Sugar Candy what ſufficeth.

This water openeth the obſtructions of Liver and Lungs, and ſtrengtheneth them.

CHAP. XXVIII. *Aqua Splenetica.*

Take roots of Fern 2 ounces, roots of Parſley, Polypody, of each an ounce and a half, roots of round Birthwort, Lovage, Calamus Aromaticus, Acorus of the water, of each 1 ounce, choſen

Rhubarb, barks of Tamarisk, Copperas, Aſh, of each half an ounce, Lovage, Seeds of Caraway, Cummin, Aniſe, of each two drams, Scolopendria, tops of Wormwood, Fumitary, Dodder, leaves of Agrimony, Ceterach, of each a handful and a half: Rich Wine 8 pounds; let them be digeſted two days, and then diſtil them in *Balneo Mariæ*.

This water ſtrengtheneth the Spleen, openeth and provoketh Urine.

CHAP. XXIX. *Aqua Febrifuga.*

Take roots of Vipers graſs, Cinquefoil, Tormentil, Dictamum, of each 6 drams, Seeds of Citron, excorticated, Carduus Benedictus, Carduus Mariæ, Sorrel, of each half an ounce, of all the Sanders of each 1 dram, of the Cordial flowers of each one handful, Goats Rue 1 handful, Harts-horn Raſped half an ounce, pour upon them bruiſed, water of Tormentil, Cychorie, Carduus Benedictus, Carduus Mariæ, Wild Poppy, of each what ſufficeth; let them be macerated three days in a glaſs cloſe ſhut, afterward add Citrons bruiſed number ſix, Juyce of Endive, Carduus Benedictus, Plantain of each one pound, Borage, Scordium, of each half a pound; let them be diſtilled in *Balneo Mariæ*.

This water is convenient in Feavers, eſpecially malignant Feavers; becauſe it driveth away the malignity, and reſiſteth putrefaction.

CHAP. XXX. *Aqua Damaſcena Odorifera.*

Take Ireos Flowers, Cloves, Cubebs, Cinamon, Grains of Paradiſe, Calamus Aromaticus, of each one ounce, Marjoram, Thyme, Bay-leaves Roſemary Flowers, Red Roſes, of each a handful, Lavender-flowers three drams; of the beſt Wine 3 meaſures; let them be macerated and diſtilled: to the diſtilled liquor add Muſk half a ſcruple, Civet 6 grains.

This water heateth, dryeth, cutteth, diſcuſſeth, and chiefly ſtrengtheneth the Heart and Head.

CHAP. XXXI, *Aqua Hyſterica.*

Take roots of Dictamnum ſeeds of Daucus, of each one ounce, Cinamon

Cinamon, Caſſi lignea, Balm, of each two ſcruples, Oriental Saffron 1 ſcruple, New Caſtorium 1 ſcruple and a half, of all theſe mixt make a powder, to which let be poured water of Rue two pounds and a half: let them ſtand in infuſion four days, and then diſtil them in *Balneo Mariæ*.

CHAP. XXXII. *Aqua Nephretica.*

Take roots of Enula Campana, Cammock, Pimpernel, Radiſh, of each one ounce, Parſley, Lovage, of each 7 drams, leaves of Lovage, Parſley, of each one handful, Saxifrage *cum toto* two ounces, Flowers of Broom, Balm, Roſemary, of each half a handful. Elder one handful, Berries of Juniper, Myrtle, Alcakengie, Aniſeeds, of each 2 ounces; cut them and infuſe them the ſpace of 8 days in 12 pounds of the beſt white Wine, then let them be diſtilled.

This water openeth and provoketh Urine: the doſe is one ſpoonful.

CHAP. XXXIII. *Aqua Aperitiva.*

Take roots of Eringo, Vipers-graſs, Fern, the greater Centaury, of each half an ounce, roots of Fennel, Barks of Capparis, Tamariſk, Aſh, of each three drams, Barks of Citrons two drams and a half: Seeds of Carduus Benedictus, Cichorie, of each half an ounce: Seeds of Endive, Creſſes, Citrons, Scariol, of each two drams, Polytricon, Adianthum, Ceterach, Dodder, Scolopendria, Betony, Endive, of each a handful and a half, Tops of Thyme, Epithymum, Hops, Flowers of St. Johns Wort, Broom, Borage, Balm, of each 1 handful, Small Raiſins 1 ounce: Cinamon 1 dram, and a half, *Spec. Dialacca* half a dram, Carduus Benedictus, Water of Hops, Scolopendria, Pauls Betony, of each one pound, Rheniſh Wine two pounds and a half; let them ſtand two dayes in a warm place in a veſſel cloſe ſtopped: afterward diſtil them in *Balneo*.

This water openeth the obſtructions of the whole body, but eſpecially of the Liver, Spleen, and Meſentery.

A Catalogue of the *Materials* and *Ingredients* used in the precedent Rules.

ROOTS.

Angelica
Avens
Butter-Bur
Calamus Aromaticus
Cyperus, long
Contra-yerva
Enula campana
Galingal
Gentian
Ginger
Horse Radish
Imperitoria
Licorice
Lovage
Orris
Sassafras
Scordium
Snake-grass
Valerian { *Common* / *Garden* / *Great* }
Vincetoxicum.
Zedoary

WOODS.

Lignum Rhodium
Sanders { *Red* / *Yellow.* }

BARKS and PILS.

Bay-tree Roots
Cassia Lignea
Cinamon { *Common* / *White* }
Citron
Guaiacum
Lignum
Orange
Pippins
Quinces
Sassafras

HERBS.

Angelica
Arsmart
Bay-leaves
Betony
Burnet
Brooklime

Balsamint

Balſamint or Coſtmary
Carduus Benedictus
Chervile, ſweet
Clary
Calamint
Creſſes { Water, Garden, Winter, Bank }
Coſtmary or Balſamint
Horehound, white
Lavender leaves
Lavender Cotton
Mint { Spear, Red }
Marjoram, Summer
Penny Royal
Roſemary
Rocket
Ros Solis
Rue
Sage { Red, Great }
Scurvygraſs { Common, Garden }
Stœchados
Southernwood
Scordium
Thyme { Wilde, Garden, Limon }
Tarragon
Trefoil, Water
Valerian, great
Wormwood { Common, Romane }

FLOWERS.

Cowſlip
Citron
Camomile
Elder
Gilliflowers, Clove
Gilliflowers, Stock, three ſorts
Jaſmine
Lavender
Lilium Convallium
Marigold
Melilot
Orange
Poppy, Red
Roſes { Red, Damask, Muſk, Bryer }
Saffron
Sage
Stœchas
Tilia or Lindentree
Thyme { Garden, Limon, Wilde }
Woodbind (or Honey-ſuckle.)

SEEDS.

Aniſe
Angelica.
Baſil
Caraway
Cardamums
Creſſe, Bank
Chervile, ſweet
Coriander

Cummin

Gummin
Fennel, sweet
Grains of Paradise
Mustard
Radish
Rocket
Scurvy-grass, Garden
Wormwood, common

FRUITS.

Apricocks
Alkermis Berries
Barley, Maulted
Cardamums
Cherries
Currans { Forain / English }
Cubebs
Cloves
Grapes
Hops
Juniper Berries
Mace
Nutmegs
Pepper { White / Long }
Quinces
Raspis, Red
Raysins, sol.
Strawberries
Saffron

Walnuts green with husks
Zedoary.

JUICES.

Limons
Walnuts green with Husks.

Others of divers kinds.

Ambergriese
Allum
Benjamin
Camphire
Confection of Alkermes
Mithridate
Musk
Treakle, Venice
Syrup of Gilliflowers
Storax
Sugar of divers sorts.

Liquid Materials.

Wines of all kinds
Beer and Ale
After-Worts, or Wash
Sugar Waters
Tilts, Dregs, Lees, or Grounds of Beer or Ale
Lees of Wines
Spirits of Wine
Rose-water

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FINIS.